

B.C. Lower Mainland Edition

September 1991

Volume 4 No. 9

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# From the Editor

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B.C. Edition • Sept 1991



**Teacher, leave those kids alone...**  
 Over the month prompted an e-mailer joke about school being a place where they take bright lights and screw them up.

Computers are changing the learning process and to some, at least, bring into question the very necessity for schools. Just as computers have brought real changes to corporations and created new options like telecommuting, home businesses and portable offices, the use of computers in education opens up the options of home schooling, using telecommunication in teaching, and brings new meaning to the concept of life-long learning.

CD-ROMs with their vast storage space and very rapid updating may just open the possibility of the old traditional route to learning. Educational software, with its endless pictures and sophisticated graphics, can entertain as well as educate, and may well mean a shifting role for teachers and the entire school system.

This month we review three Canadian-developed education packages. All the *Webb Type and Crosscountry Canada* from Delistech and *SchoolWare by Quality Learning Systems*. There are a few new examples of "You to learn" educational software. We also bring you an article from School Superintendent Stewart B. Lachance that highlights what is desirable in good educational software from a teacher's perspective. George Stale offers us "A Tale of Two Dyslexics," a story about how technology was able to provide a solution for adults with learning disabilities.

## Life-long Learning

Life-long learning is a topic we tackle in articles on training. Bert Dobbin, a Winnipeg freelance writer, tells us that only the educated will survive. Ross McNair, a recent graduate of the Informix program at Capilano College in North Vancouver, gives us the saga of his own search after graduation.

## Other Stuff

Nelson Bates takes a look at *CloudPage*, an optical character recognition package that runs under Windows. The program allows you to scan in text from magazines, books, letters, etc. *CloudPage* then "reads" the text and converts it into a graphics style as editable text file. Although the technology is not yet 100% accurate, its recommendations for use suggest the technology is well worth the investment.

Nelson has recently relocated his desktop publishing training business to the Okanagan valley. We wish him well and hope to see his occasional article from there.

## Ace Moves East, Seeks Wild Life

Speaking of relocating, we learned this month that we are losing our ace desktop publisher and advertising production person, Carolyn Howe. She is moving to Toronto to pursue the wild life. Our loss, since lucky employees in Toronto's gain. We wish her only the best. We will be accepting resumes in fill the position for the end of October. If you are skilled in desktop publishing and are able to laugh appreciatively at your employer's occasionally dumb jokes, we may have a job for you.

Enjoy the issue.

*Simon Singh Khosla*  
 Editor

## Editorial Schedule

(B.C. Edition Please call for Alberta & Manitoba schedules)

Issue	Topics	Copy	Carriers Ready	Distribution
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# Masthead

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# Mailbox



## OS/2 For You?

I read Mr. Ray's interesting article on OS/2 in your August issue; it was most informative.

His message is plain enough: buy OS/2 instead of Windows 3.0 and the necessary supplementary programs and save money. Mr. Ray's advice makes a lot of sense for someone who is going to buy a new system where OS/2 is already available. However, a lot of us have already installed Windows/DOS 3.0 on 386 class computers and purchased those supplementary programs.

My system works to my satisfaction. I use MS Word for Windows and Excel 3.0, together with a number of specialized programs. I do get the occasional hiccup, and it would be nice to have a more "solid" operating system, but I do not see the necessity to buy OS/2 as light of the investment I have already made.

What's OS/2, having a 386 bit structure, practically designed to work with 386 computers? Wouldn't it be better off to wait for OS/3,

which will have a 32 bit structure and will be designed to make full use of the potential of the 386/486 computers? Do you think that the software companies are going to program for OS/2, or will they also wait for OS/3? What is the score on OS/3 nowadays?

There is always the question as to how long one should wait for major advances or go with technology now, when, like me, one was faced with watching a system so as to be "open for business" on a given date.

I enjoy your paper very much; the material is both useful. It is rare to read opinions from people other than John Denek, who has heart, who seems to slip his little witly compound into almost everything from PC Magazine to the Vancouver Sun.

And bravo for a 3-C-based enterprise! I bought my system from a company whose advertisement caught my eye in your paper.

David P. Robinson,  
Buckeye Industries, Vancouver

See Newsletter for more on the future of OS/2



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## Kudos keep coming

Just a few in my keep up the good work with *The Computer Zepher*. I've made a professional reader of this last three issues and find the whole effort excellent on every way layout, articles (as in good writings), lots of latest product info, and great display ads.

In particular, I enjoyed the series by Mike (Bosack) entitled, "How to Buy a Computer—For Novices" also Gordon's (Zaner) "Tips & Tricks" for article will help others enjoy the convenience of the useful disk boards now to be had here being for a couple of years now.

A little note for Gordon: Glad you recommended a stand-for-every machine, perhaps that could be used on the road with my Toshiba 3860 laptop. Something that just sits on the 9 pin connector, battery/AC operated would be perfect — at the price is around \$2000. Any suggestions?

William J. Braver  
Vancouver

We've found the Maxline external portable fax/modem to be a good product. The tag (\$79.95) is in an AC or battery-powered 2400-bps. Max-compatible modem with error correction and data compression, plus a 3600-bps and real money for that worth in the budget. It is available in both PC and Mac configurations and runs you to sleep when not in use to answer today paper. It's from Maxcom, Inc., 494-434-6438. They are doing up local dealers.

## Appleworks for the teacher

I was interested in your advice to reader Fred Houghton, who wanted to transfer his AppleWorks files to various MS-DOS formats. Unfortunately, he will not be able to implement your advice because AppleWorks does not allow you to save files in MS-DOS or IBM formats.

Here is a better solution: A product called *GrowWorks* consists of a cable to connect an Apple II with an IBM-compatible computer and file transfer software for both machines. During the transfer, *GrowWorks* can change AppleWorks' word processing files into WordPerfect format and spreadsheet files into Lotus 1-2-3 format. *GrowWorks* also supports MS Works and is available for US\$599 from Softdisk-pkcs, Inc., P.O. Box 12418, Raleigh, NC 27619. Tel.: (919) 876-5864.

Gareth Jones  
Vancouver

## Apple talk

I too love with and loved my Apple IIe over an eight-year period spanning a II plus, the IIc and IIGS but found myself converted into switching to MS-DOS thanks to Apple's negligence of me all I can now the happen size of a Zoro 386 D3 laptop with a 40MB HD and Super VGA card. This is a fabulous machine at only \$28,999 (bundled) and is the equal of any \$5,700 Toshiba laptop with similar options.

Regardless like Mr. Houghton of Laptopness, I found myself with approximately 2000 old ProDOS files

that I wished to have access to via my new MS-DOS machine. I was worried because there is a weak sampler solution... *GrowWorks*. The only drawback that I found was that I had to re-save all my files to fit the more restrictive parameters dictated by MS-DOS.

Ron MacDonald  
Vancouver

Thanks guys, we have already done the move.

## More Polish

In answer to Mr. Drozdzki's letter (June 1991), you didn't mention 3 simple solutions:

1. MS-DOS 3.0 has code pages for all European languages, including Polish. With its improved editor, all that is required is a compatible printer which accepts downloadable characters. The printer has to be one of the following: IBM Proprinter II and II Model 4001, II and II Model 4022, Proprinter X24E Model 4027, 4028 or IBM Qwertwriter III Model 5090 or compatibles.

2. WordPerfect 5.1 has all the characters for Polish in its character file. The keyboard layout can be changed on the Setup screen (Shift-F10). Any printer with graphic capability will print out Polish characters.

3. Inter-LRA is a shareware wordprocessor for Polish (and many other languages). It requires a printer which accepts downloadable characters. They also offer a guide to multilingual spelling checkers, dictionaries, thesauri and desktop publishing in Polish. There is no translation software. Their address is Inter Software Systems International Ltd., P.O. Box 3046, Stamford, CT 06905-0068, Tel. (800) 979-7412.

From my experience, the hardest thing involving an adequate printer

By the way, the Java issue was the first I've ever read and I think it's great. We did indeed do a check for my subscription for 1 year.

R. Peter Urbanski  
Montreal/Quebec

## BBS query

Enclosed is my subscription for next year... I actually work on Bells Canada. I have a Toshiba computer here with a modem. I have satellite access to North Bay Military Base and I... I belong to On Line New out of Thunder Bay and used to belong to the old G.E.S. out of Toronto. I have been trying to find a Vancouver BBS that I can access from North Bay. Do you have any suggestions?

I look forward to getting your paper every month, to see what is happening in computer in general and in Vancouver in particular.

Robin Fry  
Wausau

Check the index for *On-line* systems. *Head Link*, *Bay* and *Dial A File* come to mind.

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## WHAT'S NEW

### What's New

#### Vancouver Business Computer Show

Industrial Trade and Consumer Shows (ITCS) is producing their first Vancouver show on September 18th & 19th at the Ballroom Space Conference Centre. The show, although expected to be smaller than the Pacific Rim Show in January, will include some legitimate software companies under the Industrial banner. It seems likely to launch a direct sales office and warehouse in Richmond in September as well. Representatives are expected from Microsoft, WordPerfect, Borland, Symantec, Microsoft, Aldus and Control Point Software among others. ITCS also produces the Canadian Computer Show in Toronto in October as well as a show in Edmonton and one in Calgary. The show runs 10 a.m. to 6 p.m. For more information, contact ITCS in Vancouver at (604) 254-2257.

#### Softworld debuts in September

To acknowledge SOFTWARE's international presence, Michael Wilson, Minister of External Affairs, will be on hand to open the event on September 18th. Delegates are expected from Japan, China, Taiwan, Hong Kong and Singapore. One of the events planned is a Trading Forum which will include a series of Vancouver presentations from developers. Potential investors are expected to volume over 100 presentations.

The goal of SOFTWARE is to help establish Vancouver as the primary gateway between North America and the Asia Pacific. It will be held in Vancouver every two years. The conference costs \$250. For more information contact Ann Hovfloyd (604) 692-9034.

#### PCCFCA Announces Annual Fair and Swap Meet Date

VANCOUVER, B.C., July 8/1991—The Pacific Coast Computer Fair Association announced today that the planning is well under way for their annual computer fair and swap meet. According to these organizers, it is the Lower Mainland's premier computer "bargain-basement" event and it will be held on Saturday, October 19, 1991, from 10 a.m. to 4 p.m. For the twelfth consecutive year, this event will be held at McPherson Centre, 7315 McPherson Avenue, Burnaby. Just a few blocks southeast of the Royal Oak Shopping Mall. The admission price of \$1 (free for children under 10 and \$2 for seniors) includes a chance to win a door prize.

As in previous years, private individuals and commercial businesses will sell new and used computer equipment, software, books, and other computer-related items. Computer clubs representing most of the popular personal computers will also have displays of equipment and software, and

club members will be available to answer questions regarding their club's functions or their equipment and its software.

The PCCFCA, a non-profit association of volunteers, is bringing back its popular "swap meet" program with two parallel sessions of talks and workshops running on the upper floor of McPherson Centre. Tentative speakers include representatives of Microsoft Canada, Apple Canada, Commodore Canada and Atari Canada.

The cost of tables for vendors will be \$25, if received before October 1, \$45 thereafter, and they can be received by calling (604) 426-3286 starting September 10th.

Further information can be found on MIND LINK 880, discussion group PCCFCA.Fair. Hosted by Peter Hughes-DATA, 375-1541, 605-1214, 695-3251. For non-members of MIND LINK: request a complimentary membership of 1 hour to access this information. If you require help call WTCC 516-6603.

#### Born to Shop

According to a newsletter put out by Jack Goetz, organizer of the quarterly Computer Swap Meet, 87% of the shoppers who attended his last meet were male. His customer survey goes on to state that 61% of all sales happen within the first two hours and 28% in the last two hours. Another reason to get there early. Jack used to be a political organizer, hence his penchant for demographics. The next Computer Swap-Meet is scheduled for September 21st at the McPherson Convention Center, 7315 McPherson Ave, Burnaby. For more information contact (604) 551-0025.

#### Postscript Color Lasers Available at Service Bureau

Both Laser's Edge and Wyning Graphics in Vancouver, and OGS Technologies in Richmond, acquired Color Laser photocopiers recently. (For the record, Laser's Edge claims to have gotten them three days before the competition, justifying their claim to bring the first to B.C.) You may have already seen color laser photocopiers in a number of locations. What makes these units unique is that they can be printed to from PC and Macintosh computers. The quality of the photocopiers is superior to most 300 dot-per-inch (dpi) laser printers, producing 400 dpi output. The samples we have seen are very convincing. At The Computer Paper, we are experimenting with using the output from these units for color keys at a considerable savings. Sample prices for quantity use, letter size \$14 and tabloid size \$19. Once you have seen one of the machines, the duplicating cost goes way down, starting at about \$3.50/letter sheet, sheet and going down with volume. If you need expensive, low-volume color documents, and you're starting from a computer, check these units out. It will be a while before they show up in your own office kitchen.



The cost of the photocopier is around \$20,000 and the RIP box to link to the computer is about \$20,000. Contact Laser's Edge at (804) 683-0774, Wyomung at (404) 684-0404, OCG Technologies (804) 273-8045.



Pictured above are (seated) Doug Koskova, President, Sharp Electronics of Canada, (left) Helen (Marie) Lewis, V.P. Information Systems and (right) Electronics owner, Karl U-Lien.

#### Minitronics opens

##### Sharp-only showroom

Minitronics Office Automation opened a Sharp Product Centre at 1948 Bayview in Vancouver on August 18th. On loan for the opening was Doug Koskova, the newly appointed president of Sharp Electronics of Canada. Products shown included Sharp's color laptop, a 386 version of their popular notebook (like PC 4600) and a variety of their TFT (Thin Film Transistor) LCD projection panels for corporate desktop presentations. The color on both the laptop and the projection panels is very impressive. Sharp seems to be on the leading edge of LCD and display technology, a good point of view for their representatives, a good point of LCD panels on other laptop computers compete with Sharp. For more information, contact Minitronics 879-9225.

#### Gops

Last month we mentioned that The Electronic Bookstore is offering printed versions of their books, previously only available online from Buz. We got the telephone number wrong. The number for The Electronic Bookstore is (804) 874-0023.

#### Mind Link! Startup Kit now available in Computer Stores

The Mind Link! Startup Kit can now be purchased at a number of Lesser Macintosh computer stores. Included in the Startup Kit is a 4-month membership, easy to follow Beginner's Guide, handy reference card, general information about the system including technical configurations tips and the equivalent of 17 daytime hours of free class. Contact Mind Link! (800) 554-6681 for the store nearest you or log on as a GUTS! and see for yourself (800) 576-1104. You can also send messages, articles, letters to the editor, etc to The Computer Paper via Mind Link!. When you log on, simply type "Computer Paper" at the first prompt. This will take you into an area of the BBS dedicated to communicating with us.

#### Slipped a Diskette?

Are you one of the 80% of the population with some kind of back pain? Two weeks from the computer seminar? Did you know that most of that pain can be relieved through proper back care? The Healthy Back! program is offering the "It's up to a Healthy Back" program to help you relieve your back pain. Some of the topics covered include good alignment, posture, mechanical back pain and relaxation. This program runs for six weeks, starting weekly starting September 17th.

Contact the Healthy Back! 294-6612 and register now. The fee is \$35 for 6 weeks.

#### Purchase Ordering Software

NEN Software of Vancouver has announced the release of a new Purchase Ordering (PO) software package. According to the developer, PO was written in Clipper and tested by local purchasing agents. It includes stock/inventory database, vendor database, previous pricing history, all tax and shipping cost, custom or built-in purchase order forms. This is the

second product in the NEN family. The first was a Facilities Energy Management package. Contact: Richmond Evergreen (604) 481-4300

#### RIP box Ripped Off

According to a recent report by Business in Vancouver, Designpoint Graphics in Richmond was recently broken into. Thieves took a number of computers, a laser printer, every disc in sight and the \$40,000 raster image processor (RIP box) for their Lasertronix machine. They apparently stopped short of hoisting the 700-

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# NewsBytes

## "Apple Needs IBM" Says Apple Executive

**SYDNEY, AUSTRALIA, JUL 26 (NSI)**—Apple's Pacific region vice president, Ian Hogg, was in Sydney last week, and is expected in the Financial Review newspaper to say IBM was crucial to the future of Apple.

When asked about the comparisons about the Apple/IBM deal, he said "I don't like to think" of it as, however, that Apple isn't the poor relation in the agreement, "because we've got the volume—we're selling more personal computers than IBM." He is reported as saying Apple was bringing valuable expertise to the marriage, including multimedia, education computing, and consumer-level technology. He said he expected the IBM sale to add at least \$1 billion over time to Apple sales, though it would be two or three years before product reached the marketplace.

Speaking about software for the new platform, he said, "We see Classic being a major player, though we won't give any concrete preference." He also said he didn't expect Apple's relationship with Microsoft to end following the announcement.

## Apple Upgrades

### Style/LaserWriter Printers

**SUNSET, CALIFORNIA, AUG 9 (NSI)**—Apple has offered enhancements to two of its printers in the form of new software that provides background printing capabilities for the StyleWriter, and new printer software that reportedly doubles the performance of the LaserWriter LS.

According to the company, the software for the StyleWriter allows users to continue working while a document is being printed. Four new TrueType fonts have also been added to the printer's Chicago, Geneva, Monaco, and New York. These join the constant set of TrueType fonts which are automatically installed as the user's system during the normal printer installation procedure, and include Times, Courier, Helvetica and Symbol.

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The new LaserWriter LS, in addition to getting an performance boost, also looks out by getting approximately 80 percent more paper capacity, up to 20 sheets from 10.

For paper/delivery news and news, visit us at [www.apple.com](http://www.apple.com) or call 1-800-541-5555.

LaserWriter LS also gets the four additional TrueType fonts.

Enlisting users of both printers can obtain the new printer software and TrueType fonts (over multibyte data) at the same time through authorized Apple centers, Apple user groups and online services.

Contact: Ken Friday, Apple Computer, 400-400-6000.

## Outbound Informs New "Mac Notebook"

**BOSTON, MASSACHUSETTS,**

**AUG 7 (NSI)**—Outbound Systems has awarded a series of notebook-sized Mac-compatible computers. The new machines will replace the original Outbound Mac portable clone, which the company has been shipping for the past 18 months.

At the MacWorld show, Outbound Systems' booth was packed from deep in rooms as the show opened. Outbound was the company's new line of notebook-sized computers. All five machines in the line measure approximately 8.5 inches deep by 11 inches wide by 2

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# FUTURE SHOP

DISCOUNT SUPERSTORES

on their fall. All of them weigh about 5.25 pounds.

This makes them the lightest Mac-compatible portables on the market. Prices start at \$2,825 for the base Minolta 68000-based machine with two megabytes (MB) of RAM, a superdrive compatible floppy disk, battery and power adapter - to \$4,299 for the top of the line model which features a 400MHz microprocessor, 4MB of RAM, the floppy drive, a ROMS hard disk, battery and power adapter.

Bob Loucheux, President of Outboard Systems, introduced the new

machines at a press conference, stating that the Notebook series is "smaller, faster, lighter, and expandable."

As to the latter claim, he explained that all five machines in the line have standardized components and the process of upgrading is simply one of snapping the new components in for the old.

Loucheux gave a demonstration at which he removed the CPU card, that also contains the RAM, and the hard disk in a way of showing the ease of upgrading the machines. Aside from these replaceable components, the

machines are powered by standard video camera type batteries which can be recharged in the computer or externally.

Expected operating life on a single battery charge is three hours. The machines provide all of the standard Macintosh connections including a single SCSI (Small Computer System Interface) connector. It is possible to dock a Macintosh to a regular Macintosh via the SCSI cable and then all of the Macintosh devices become regular SCSI devices on the base Macintosh.

Outboard Systems has asked the

problem of providing a set of ROMs for their machines by signing an agreement with Apple Computer. Details of the agreement are being kept confidential, however, Loucheux did describe the process.

When a customer purchases an Outboard Macintosh, he also purchases a serial Mac II/2X or SE. Outboard then repurchases the "shell" of the used Macintosh (i.e., everything but the ROMs) back from the customer and the goes of it. As a matter of fact, the customer never sees the used Macintosh that he purchased. If the customer has a used Macintosh, Outboard will sell the Macintosh to him for \$295 less.

Loucheux was asked about the availability of Macintosh ROMs in case of high demand for his product. He replied that there are now over three million Macintoshes that sport the particular ROMs that his machines need and that there should be no problem getting them.

The machine was demonstrated as System 7.0 compatible. Loucheux stated that shipments to the dealer channels began over two weeks ago and that all 250-plus dealers should have received their machines by now. Most of Outboard's dealers are also Apple dealers.

Quarterly Jack Anne Sutton, Outboard Systems 812-741-0208

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Bruce Green, The Computer Paper, Aug/91

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See how this technology is well as the production line for small computers, so anyone can use it. For Sony to suggest that the manufacture of a book-type Macintosh.

Apple Computer's Portable has been on the market since 1988, but its popularity is limited due to the weight (7 lbs) and the price (\$94,000 plus or \$7,400).

Sony also has advanced multimedia technology which obviously suggest

# VERSATILE

Apple Computer might use in furthering mathematics development in the Microsoft, and specifically a notebook Mac.

Claris Inc., 410-344-0200.

## Claris Introduces ClarisWorks Integrated Software

SANTA CLARA, CALIFORNIA, JUL 29 (AP)—Claris has introduced an integrated software package for Macintosh computers that will directly compete with Microsoft Works.

Like Microsoft Works, ClarisWorks features word processing, graphics, spreadsheets, charting, database management, and communications features.

Review Each, spreadsheets for Claris and VisiCalc from Apple Computer Works, ClarisWorks lets users access tools and features from within a single document. Other existing integrated products force the user to move among different "modules."

A tool palette allows users to add text, graphics, calculations and charts to their documents at any time.

The company maintains that users can upgrade to the company's MacWrite Pro for word processing, MacDraw Pro for graphics, and MacDatabase Pro for database management with relative ease.

ClarisWorks is scheduled to ship in the United States during the fourth quarter of 1991 at the suggested price of US \$299. Current owners of Claris AppleWorks, AppleWorks GII, Microsoft Works, Symantec GrandWorks, and RayTalk can upgrade to ClarisWorks for \$99.

Contact: News Tech, Claris Corp., 408-887-7324.

## Claris Ships Resolve Spreadsheet

SANTA CLARA, CALIFORNIA, AUG 6 (AP)—Following its recent release of the ClarisWorks integrated spreadsheet to compete directly with Microsoft Works, Claris has now announced shipments of its new Resolve spreadsheet for the Macintosh, designed to take market share from the popular Excel, and the edge out of the recently announced Lotus 1-2-3 for the Mac.

According to the company, Resolve features an intuitive user interface that combines ease of use and colorful graphics with powerful new spreadsheet functionality. The spreadsheet also offers advanced features, including a scripting language to enable sophisticated users to automate repetitive tasks, and the company.

As with all new Macintosh releases from the company, the company says that Resolve sales fall short of expectations.

Resolve is available now from authorized Claris dealers in the United States at a suggested retail price of \$299. The company is offering an upgrade policy where current U.S. owners of Microsoft Excel, Lotus 1-2-3, Infinitum Wings, Ashton-Tate Full Impact and Bravo Technology MacDraw programs can purchase Resolve for \$99.

Contact: News Tech, Claris Corp., 408-887-7324.

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## Flight Simulator 4.0 Debuts

REDMOND, MASSACHUSETTS, AUG 4 (ENR)—Microsoft has announced the release of Flight Simulator Version 4.0 for the Windows. The package brings to the Mac many of the enhancements seen in the latest editions for the IBM PC environment.

The latest release of the Mac Flight Simulator software will allow color on screen as well as 3D in color later than the Mac Plus. Desktop then will dual three-dimensional graphics, whether using the color or monochrome screen.

Microsoft now offers a fleet of aircraft including a Cessna 182, a Lear Jet, a Spirit of St. Louis, and a Schweizer 3-SE. You can even design and fly your own plane, using the engineering and aerodynamic features. If you design your own plane, you can modify the appearance and the aerodynamics of the aircraft and test them against the physical laws of flight.

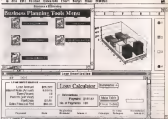
When using the package, pilots will have multiple windows available to provide an on-screen view of the selected flight mode, a cockpit view, a look from the tower, or a view from a sponsor plane.

For complete pilots, on-screen flight instruction teaches everything from the basics to advanced, according to Microsoft. The new release is compatible with Apple's new operating system, System 7.0.

Contact Sarah Chaff, Microsoft, 206-882-8800.

## NEWSBYTES

1. 486 Pentium (see MAG/COM) ..... \$1,200



## MacWorld Expo Report

BOSTON, MASSACHUSETTS, AUG 12 (ENR)—The Boston version of the MacWorld Expo has always been noted as one of the highlights of the year for Macintosh fans. This year was no exception with hundreds of computers among this week as their preferred time to showcase new products or upgrades. In addition to the product announcements by Microsoft in the area,

several products were seen for the first time as technology demonstrated for the first time to the sold Apple Mac users who came to the show. This article is a collection of some of the more products of these.

### New Software

Claris has announced that it has begun to ship Rascal, its new spreadsheet program. Rascal, based on the Wang-based Rascal (which provided several years ago that has been enhanced and improved) and had the Rascal Clari "look and feel" put on it. The

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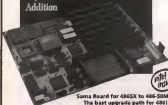
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package is completely System 7.0 compatible and takes advantage of all of System 7.0's features. Resolve will retail for \$199 and Glaze is offering current users of Glaze a offering current users of Glaze the option of switching to Resolve for a fee of \$99.

Shanghai Entertainment has begun shipments of its new arcade game for the Atari called "Furious Dragon." This is a graphical action game that takes place in a big change in with lots of killer monsters and a single hero who must conquer all of the living beasts.

Dragon will retail for \$195.

### Software Upgrades

Imagin Solutions has announced a sweeping upgrade program and realignment of their line of IBM/PC software emulators. All three of the company's production-line Level 1 SoftPC, Universal SoftPC, and SoftAT—have now been upgraded to Version 2.0. The new version features support for the Microsoft CD-ROM (compact disk, read only memory) ecosystem, MacII non-working capability, more printer emulations, new user interface, System 7.0

compatibility, and a quicker installation process.

Apple Computer announced upgrades to two of its printer drivers. The Postnet LaserWriter IIx and the StyleWriter will now be shipped with a new version of the printer driver. These new drivers enhance the printer's speed, allow for background printing, support larger paper size capacities, and include four more "font-type" fonts. Current users wishing to upgrade should be able to get the new versions from their dealers or user groups. Apple is not changing the dealers or user

groups for the new software.

AppleLink will begin shipping Version 1.7 of its backup software. AppleLink IIx has AppleLink IIx accessories all of the features of Network IIx/IIx which in turn is being discontinued by the company. Version 1.7 also brings an additional new benefit to complete support of Apple's System 7. Upgrades to current users will be available for \$24.95 while Network IIx/IIx users will be offered a 1x containing 33 copies of AppleLink for \$15 per unit.

Infoline Design has released 3.0. There, a non-variant logo game that is intended to be educational but still retail on element of fun. This game has been released previously under the CommaWare label. Unfortunately, CommaWare filed for bankruptcy prior to being able to distribute a large number of copies, leaving Infoline Design to pick up the distribution rights.

Maphia demonstrated Maphia for Macintosh 1.0. This new version, which is shipping now, incorporates increased performance for drawing and reducing maps on the screen, dynamic rotation functions, the closely maps, and the ability to locate an intersection by entering the names of the streets involved. The price of the package has been set at \$95 and an international version is also in work.

Reference Systems has announced that CommaWare, Inc. is compatible with Apple's System 7.0 and takes advantage of some features of the new operating system. Reference files before help are being utilized to make it easier for users to make use of the capabilities of CommaWare files according to the company.

### Software Demos

Imagin Solutions has demonstrated their upcoming product SoftNode. SoftNode will allow Macintosh users running SoftPC to run in November 1991. SoftNode will be compatible with Power PC II Macintosh Version 2.0, Advanced Macintosh Version 2.0, and Macintosh Plus in the February 1992 version. All other software products that work within these environments will work with SoftNode. SoftNode is expected to begin shipping in September and will retail for \$175 for a significant and \$1199 for a full size home license.

Broderbund was demonstrating a new line of animated stories on CD-ROM. Called the "Young Books" series, Broderbund announced plans to have at least four books released soon. These books contain an interactive presentation with animations, sound effects, special effects, and a hyper text like search facility to encourage children to explore the story and all of its ramifications.

Tales will include "Just Grandma and Me," "Arthur the Youngest," "The Cat in the Hat," and "The Story of the Three Little Pigs." The first in the series, "Just Grandma and Me"—is about the ship-

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Lotus was demonstrating its upcoming spreadsheet, Lotus 1-2-3 for the Macintosh. This new spreadsheet is now in beta testing and is expected to begin shipping in the fall. Lotus 1-2-3 for Macintosh is a System 7.0 compatible product that has been designed from the ground up to be a Macintosh application while maintaining compatibility with Lotus 1-2-3 on other platforms. Included in the package will be Adobe's Type Manager with 12 TrueType fonts, and BackScribe, which is a single-clickable macro-driven equation editor.

However, one disappointing aspect of the upcoming release of BackScribe package also was BackScribe's compatibility to a host for certain different computer games. One of the games are hemisphere simulations that concentrate on demonstrating the interrelationships between all of the hemispheres on the earth. Particular attention is placed on the Antarctic rain forest. The price will begin shipping in September.

### More Software Upgrades

BackScribe was chosen as an upgrade to TypeStyle. TypeStyle 1.0 is System 7.0 ready and offers complete support for TrueType. Additional enhancements include support for 24 bit color and better screen rendering time. TypeStyle 2.0 also features Letter Frame, which allows a user to select a range of letters on which to apply the effects. In addition, TypeStyle will have Adobe Type Manager installed in its package and a package of 12 typefaces will be included as well. TypeStyle 1.0 will begin shipping this fall.

Adobe introduced version 3 of Adobe SuperPaint. New features of the product include support for up to 32 bit color, new image enhancement capabilities, vector fill and fill/Stroke. Upgrades will cost \$65 while new copies can be purchased for \$119. Availability is expected to be mid-September.

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\* *Notes:* The *Acacia* trees are *Acacia saligna* and *Acacia mangium*.

## ANSWER



1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

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**Keywords:** child sexual abuse; disclosure; disclosure strategies

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Figure 1. The effect of the number of trials on the number of correct responses. The number of correct responses was significantly higher for the 10 trials condition than for the 5 trials condition. The number of correct responses was significantly higher for the 10 trials condition than for the 5 trials condition. The number of correct responses was significantly higher for the 10 trials condition than for the 5 trials condition.

## Software Technology Innovations

From Technology and Action was showing a method in which children then moved to 4th Dimension can be extracted and translated into a form that can be used by TransMoksha for publication.

The method, which ACUS used to obtain approval of their character, has always been present within this dimension that has not really been used to date. France Technology and Action chose to advertise its existence more broadly to encourage its use and to show its usefulness as a result of external consumer requests. Both companies would be happy to show this method to all carriers there who have a need to understand it.

[illegible]

Q43 will begin shipping a pair of printers at the end of this month. The

15.000 10.000 5.000 0.000 -5.000 -10.000 -15.000

**Typewriter** is a new hand-held device that is capable of working with both characters and graphics data. Called "Typewriter Plus Graphics," the new model can perform optical character recognition (OCR) in the text part of a scanned document while *Glenn's The Graphic Editor* allows the user to manipulate any scanned graphics that were also scanned in *Typewriter Plus Graphics* (called on the first hand-held device that can do both functions). Characters to features not supported to begin in September.

Radian has begun shipment of its new line of filters designed to reduce the quantity of low-frequency field emissions emanating from their systems. The new Ego Shield line has been specifically designed to be custom fit to the Radian line of monitors of all sizes that are currently being shipped. All of the filters in the line can be installed on the monitor by the owner, there is no need for a technically-trained person.

Minolta has begun shipping its new high-end 37-megapixel camera that is compatible with the Minolta and most PCs and compatibles. Intended primarily for demonstration purposes, the new camera has display in megapixels of 340 by 480, 1,130 by 1,020, or 1,280 by 1,024 dpi. One notable feature is its built-in video converter that takes care of NTSC, PAL, SECAM, Composite Video, and S-Video signals very easily.

Texas announced the release of its new Accusim-Writer IV. This is a printer controller that upgrades the performance of your Hewlett-Packard LaserJet printer.

[illegible]

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Microarray. Kuo and colleagues present a robust method for data analysis. The authors show that the use of a single microarray chip can be used to simultaneously measure the expression of thousands of genes. The authors show that the use of a single microarray chip can be used to simultaneously measure the expression of thousands of genes. The authors show that the use of a single microarray chip can be used to simultaneously measure the expression of thousands of genes.

## Raven

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Series II laser printers. The upgrade allows the printer to increase its resolution to 600 by 600 dpi while allowing the manufacturer printing from more than one master (most AppleLink, most commercial). There is also an advanced memory management feature that allows one page to be composed while the previous page is being printed. The latest series will also accept 35 Postscript fonts.

# Aldus Debuts SuperPaint 3.0

**BOSTON, MASSACHUSETTS, AUG 9 (UPI)**—Aldus Corporation introduced what it describes as a major new release of Aldus SuperPaint at MacWorld in Boston this week.

SuperPaint 3.0 is an integrated painting, drawing, and image enhancement program for the Macintosh computer. New features include support for 1, 8, 16, and 32-bit documents, and includes both Macintosh and color support. "Customers working with their systems, for example, will be able to have quick access to nearly 18.5 million colors with out requiring a 24-bit board," said Cindy Taylor, SuperPaint product manager.

The image enhancement feature of SuperPaint is a new addition. Features include brightness, contrast, color balance, smoothing, straighten, rotate, lighten, darken, and invert.

Another new feature is texture fills. Several fill patterns are provided, and others can be created by the user and then applied in place or done. EPS textures can be saved from another program, such as Aldus Freehand, and used within SuperPaint.

Gradients have also been added. Gradients are gradual transitions from one color to another. They can be created in point or line, and up to 256 colors can be used as a single gradient. Freehand language gradients can be created in the draw mode.

Aldus now is fast lane, allowing the user to move easily across tools and palettes. Tapto and the simplified interface make the program easier to learn and use.

SuperPaint will be available in the third quarter of this year at a suggested retail price of \$139. Registered users will receive upgrade information in the mail. Upgrades cost \$49 plus shipping and tax. More information about upgrades can be had by calling 818-685-8544.

A Macintosh plus, Classic, SE, Portable, SE/30, LE or II series, with 2MB of RAM, System 4.0.3 or later, a hard disk and one 800K floppy drive is required for the Macintosh upgrade. For color, you'll need a Macintosh SE/30 LE or II series, 2MB of RAM, 10-bit QuadBus, System 4.0.3 or later, a hard disk and one 800K floppy drive. Certain system files, third party software, 800-855-8544.

# Sony Demos Multimedia

**BOSTON, MASSACHUSETTS, AUG 7 (UPI)**—The Computer Peripherals Division of Sony Corporation of America has demonstrated several new multimedia products at MacWorld.

The Sony VOICE 148 video card is being billed as the first Mac VCR, thus was directly designed to be a computer peripheral. The Sony made this player is being billed as the first peripheral product that can play different types of audio from audio CDs through video connections as well.

The Sony VOICE 148 allows you to control the playing of these tapes from your computer, the company claims. While Sony was demonstrating only Macintosh control at the show, Sony representatives mentioned that the PC products are not far behind. Based on a hint that is the same as Apple's CD player, the Sony product is controlled via a serial port and includes VHS-C (Video Camera Control Architecture). About 70 developers have announced their intention to develop products that use VHS-C.

The audio disc player model MDP-1100 is a product that allows you to control the playing of audiocass and other media types from your computer. The MDP-1100 has a unique tray that allows you to place media from audio CDs through video inserts on it. The computer controls the MDP as a serial link.

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\* With data compression, actual capacity will vary depending on your data.

There is still the need for a separate video card if there is a desire for any editing features.

Both products were demonstrated at the show and are not yet available. The only option to begin shipping the MDX1100 is the end of this month, while the VDDC300 may be shipping by the end of 1991. Pricing on the MDX1100 is \$795 while it has yet to be established on the VDDC300.

Both products are to be used to increase training and educational applications, according to the company. One of the interesting features that the MDX1100 supports is its bar code manual read. With this read and a sheet of printed bar codes, a person can control the machine and therefore the flow of the presentation. Contact: IBM Display Technology Solutions, 910-555-0055.

### Mohibus Display Boosts Classic To 32-Bit Speed

ESSEXVILLE, CALIFORNIA, AUG 12 (ENR)—The new 700P display unit from Mohibus Technologies increases the performance of the Apple Macintosh Classic by up to six times, and gives it the operating speed of a Mac IIx at about the company.

The display gives the Mac Classic a large screen and 25 MHz speed for the suggested price of \$1,195. A language option is set to be for \$1,345. Both will be available by September 1991.

"Classic owners will have the speed and display area that are necessary to run Apple's 7.5- & 800px productivity"

and Ramen, Mohibus, president of Mohibus.

The company said that it will also offer virtual memory for either the SE or the Classic. Systems 7.0 does not support virtual memory on the forward block. But of Consensus Corporation's Virtual 3.0 software is used, the Mohibus accelerated Mac can access up to 36 megabytes of application memory, four times the memory normally associated with the SE and Classic, and the company.

Mohibus is including Consensus Virtual 3.0 through December 1, 1991, with its \$295 PMMU option (an upgrade for the base \$995 Display System, which does not include this processor) and its complete "700P" 250 display system (which includes the PMMU).

A language 600 Display for the Classic with virtual memory is available for \$1,200 direct from Mohibus. The \$199 Consensus software is available at no extra cost to the customer. Previous customers who purchased the PMMU option can upgrade to Virtual 3.0 for \$29.

Both the Mohibus large external display and the Mac's built-in monitor can be used in the same time using the company's dual-screen software. Mohibus' monochrome display uses Swedish monochrome for low cost.

Both monitors offer a 75 Hz refresh rate, and the monochrome display has a 70 dots-per-inch (dpi) resolution, while the two-page display offers 75 dpi.

Contact: Paul Wampler, Mohibus Technology, 910-555-0055.

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According to the company, OmniPage 3.0 is compatible with Apple's new Macintosh System 7 operating system and includes built-in spellchecking and desktop-to-text type-recognition programs. The new version also includes expanded support for scanners.

OmniSpell, an interactive spelling checker that was previously available only as an add-on product, is now built into OmniPage. According to Eikon, the software is specially designed to detect and correct errors that can occur during the recognition process.

OmniPage 3.0 also includes OmniDraw, which was also previously only available as an add-on product. The software allows for the recognition of text generated as draft mode or sample documents printers.

The Apple Mac's System 7.0 "publish and subscribe" feature is also supported, allowing for enhanced storage and retrieval capabilities, and the company.

Gene mentions that OmniPage 3.0 can recognize nearly all commercial fonts, in sizes ranging from six points to 72 points, at speeds of up to 118 characters-per-second, depending on CPU (central processor unit) speed. The software can also read 31 European languages, and automatically separates graphics from text and numbers.

The Typebit Plus Graphics is a handheld Microsoft-compatible scanner that combines optical character recognition (OCR) technology with image scanning and editing software.

According to the company, it is the only handheld scanner that includes the ability to edit both text and graphics images. In addition to OCR functions, Typebit Plus Graphics also includes image editing software called the Graphic Editor which creates black-and-white line art or continuous-tone images with up to 256 shades of gray.

Typebit Plus Graphics requires an Apple Ilex Classic or above, 4MB of RAM and a hard-disk drive. It will operate under System 6.0 and above, including System 7.0.

OmniPage 3.0 will run on any

Macintosh 68020- or 68030-based Mac with at least 4MB of RAM, a hard disk with at least 2MB of available space, and a compatible 300-character-per-minute System 6.0 or above is required.

Available immediately, the suggested retail price of OmniPage 3.0 is \$495. Typebit Plus Graphics has a suggested retail price of \$495 and will be available in September.

The company is planning an upgrade program for registered owners of the Typebit and Typebit Plus for the Mac showing they can receive a software upgrade to Typebit Plus Graphics for \$75. Contact Larry Miller, Canon Corp. 400-856-1200.

### Toronto Firm Puts Children's Books In Multimedia Form

TORONTO, ONTARIO, AUG. 18 (AP)—Eikon Knowledge Research is offering a series of children's books in the form of multimedia software for the Apple Macintosh. The three-year-old company uses multimedia to edit features such as speech, music, and sound effects.

The metaphor of a book is preserved on the computer screen, and Richard Wink, vice-president of market development, says screen books like a Page.

In turn the page, the user clicks with the mouse on the screen. The Mac's built-in audio capabilities provide a reading of the text while it is displayed on the screen, with music and sound effects added.

Another feature is the ability to click on a word and hear it pronounced, and see a definition. Similar capabilities are available for pictures. Eikon currently has 15 of the multimedia books available, at prices from US\$75 to US\$99. But future possibilities go beyond what does a book.

"What we have developed here is a technology for putting a printed book on a screen," Wink says. "It just so happens we started out with kids' books."

Steve Malinen, a consultant with Wellesley, Massachusetts-based research firm Inova Corporation, and training

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and education are currently the most active areas of microcomputer applications development, though the business market will ultimately be larger.

Contact: Ross Ferguson or Robert Webb, Sales, Intel Technology Resources, 410-250-0310, to 410-250-0340.

## PRODUCTS

### Andert Designs Pocket Modern For Atari Portfolio

MILTON ROMMS, ENGLAND, JUL 90 (EN)—Andert Communications has designed and manufactured a pocket modem for the Atari Portfolio palmtop PC.

The modem, which supports 1200 and 1800 bps-per-second (bps), is being launched with the Atari Portfolio PC for US\$199.95.

According to Andert, the pocket modem was specifically designed for the Portfolio, drawing power from the Portfolio's battery pack—this saves on weight, as the modem does not require a battery, the company claims.

Equipped with the hardware is a copy of Andert's telecommunications package for the Portfolio, which supports V.22B, V.2200 and telecopy terminal connections, as well as X-Modem and ASCII file transfers.

"By working closely with a portable computer supplier such as IBM, we can develop a modem to our exact specifications, which can help to ensure the portable nature of the product," explained Tony Jeffers, Andert's founder and managing director. IBM, the developers of the Atari

Portfolio, is pleased with the pocket modem. Commenting on the modem, Peter Robbins, IBM's co-founder, said: "The ultimate challenge in portable computing is to provide the travelling businessman with the capabilities of his office counterpart, while retaining a portable product."

"The development of the Pocket modem means we can offer travelling businessmen immediate access to office-based computer records and provide a portable email system with a product weighing less than two pounds for under US\$200," he added.

Contact: Andert Communications Ltd 0988-241700.

### Vancouver Exchange Sells System To Mexico

VANCOUVER, BC, AUG 14 (EN)—The Vancouver Stock Exchange (VSE) has announced the sale of its computerized stock trading system to the Mexican Stock Exchange. The deal falls line closely to the value of the VSE's first sale to the Vancouverian exchange in April.

The Vancouver Stock Exchange, Canada's third-largest, expects to make about US\$180,000 on the sale. The exchange will be involved as follow-up consulting on implementation and training.

The system, developed by the Vancouver exchange and New York software developer TC&M Systems to run on IBM hardware, has been running at Vancouver since May of last year.

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September 13	October 12	September 19, 20
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## COMPANION NEWS

Spokane, David Lowery said that the exchange has led for sales to other exchanges as well.

Like the Vancouver site, the Montreal deal involves the VSI, TCM, and IBM. These parties and the Montreal Stock Exchange were scheduled to sign agreements August 13 covering hardware and software sales as well as telecommunications and consulting contracts.

Chicago: David Lowery, Vancouver Stock Exchange 408-8871 (30), to 604-670-0001.

### Joint Venture Tackles Systems Management in B.C.

VANCOUVER, B.C., AUG. 18 (P.R.)—The B.C. Tel Group, parent of British Columbia Telephone, has announced plans to form a joint venture with Canada's largest computer service bureau to provide systems management services in British Columbia.

The deal is an agreement in principle to be, as B.C. Tel is still negotiating details of the deal with Kogut, Boston-based, Worldwide Computer Corporation. Plans call for BCC Canada to provide consulting services to the new company.

IBM Canada has a 25 percent stake in Worldwide, acquired in March in a deal that saw Worldwide take over STM Systems Corporation, the Vancouver subsidiary of Marlboro, Ontario-based International Business Machines Corporation, to become Canada's largest service bureau. International Data-Tech and Worldwide's former parent company, Spokenhouse Telephone, also hold 25 percent each.

The new company will begin operations in the fourth quarter of this year. B.C. Tel officials said further details are to be released once formal agreements are signed, which Kitzko said is likely to happen by the end of August. Contact: Marlene Kitzko, B.C. Tel 684-4331, ext. 300-400 (34), Press Dept. (34), 410-4331, 410-4331, 410-4331, 410-4331.

### Built To Market Municipal Accounting

MARLBOROUGH, ONTARIO, JUL. 19 (P.R.)—Built To Market Municipal Systems will market Concord Municipal Accounting and Information System (MAIS) software across Canada. The software comes from Concord Consultants of Richmond, British Columbia.

Concord, an eight-year-old computer software company, develops and sells software to municipal governments in British Columbia. Under a joint marketing agreement, built will sell the MAIS software to Canadian municipalities, a spokeswoman said.

The Concord MAIS software runs on Bull's DPX2 series systems. Built officials said it is the country's largest supplier of hardware and software to municipal governments.

Contact: Terry de Bruin, The Concordized Group Inc. 416-491-0000, to 416-491-0000, 416-491-0000, 416-491-0000.

## COMMODORE NEWS

**Commodore Earnings Soar**  
NEW YORK, NEW YORK, AUG. 14 (P.R.)—Following the recent computer industry trend to gloomy financial results, Commodore International has reported a more than 38-fold increase in net income for third 1991. Commodore earned net income before extraordinary items of US\$94.2 million in the year ended June 30, up from US\$2.5 million last year.

An extraordinary charge of US\$9.2 million (owing to the debt settlement of a court case brought the third 1991) net income figure shows of US\$85.0 million. Commodore's annual sales rose 28 percent, from US\$487.3 million to US\$624.3 million.

Announcing the results, Irving Gould, Commodore's chairman and chief executive, said the results reflect the company's strength in Europe, which accounted for more than 50 percent of the company's total sales.

Commodore said sales of all its products grew in the fourth quarter of third 1991. Sales of the IBM-compatible line of PCs rose 28 percent, sales of the venerable Commodore 64 increased 30 percent and those of the Amiga line grew by 30 percent, the company said. Contact: Jim Shapiro, Commodore Canada, 416-492-4292, to 416-492-4292.

### World Of Commodore Show Breaks Records

SYDNEY, AUSTRALIA, JUL. 22 (P.R.)—The World Of Commodore/Ampex exhibition held at Sydney last weekend attracted a record 25,000 people to the event. By contrast, the New York World of Commodore/Ampex only had 10,000 visitors.

"The public response was simply unbelievable," said Commodore Australia Manager Pat Byrne. He stressed CDTV—Commodore's interactive, CD-based multimedia system—as one of the main factors. "But it was the only one—there were displays of the latest computer applications, and every sector was heavily over-attended."

As well as many local Australian visitors, there were overseas exhibitors, some with brand-new products to test on the marketplace. Most visitors would find a number of CD-based applications for the CDTV system. These ranged from music composition software right up to full on-line encyclopedia with moving video and voice content. Look up Rockhouse in the last section of the encyclopedia, see it fly and hear its call.

The show was co-located around the world by The Hunter Group of Canada, Canada. The Office at 416-2-0000000 to 416-2-0000000.

### Birthplace Of IC Becomes Protected Site

PALO ALTO, CALIFORNIA, AUG. 9 (P.R.)—Who says California has no history? It just so happens that the birthplace of the first commercial integrated circuit has been designated a "registered historical landmark" by the Office of Historical Preservation for the

## State of California

The state now joins the garage as which Bill Hewlett and David Packard began their famous company as the second such landmark. The registered landmark designation is the 1000th for the state and the second for Silicon Valley.

The designation recognizes the significance of the integrated circuit developed in 1959 by the late Dr. Robert N. Noyce at Fairchild Semiconductor.

In developing the integrated circuit, Noyce used a method of linking the different components of an electronic circuit together by etching a conductive aluminum layer onto "sandwich" in the silicon wafer, instead of interconnecting the elements with wires. The "sandwich-board" process allowed the integrated circuit to be built efficiently as large volumes which in turn made ICs and their derivatives affordable to the masses.

The placement of the plaque honoring Noyce's integrated circuit will be at 844 East Charleston Road in Palo Alto, where Fairchild Semiconductor began its operations in 1957.

Contact: Howard High Tech Corp., 408/755-1522

## Philippe Kahn Speaks On Lotus Suit, AmFox Suit

PASADENA, CALIFORNIA, (U) (S)—Lotus's President Philippe Kahn has expressed his views on the litigation issues between Lotus and AmFox and between Lotus-Tate (the company Lotus is in the process of

partnering) and Fox Software, before a crowd of several thousand at a special meeting of the Pasadena IBM Users Group at the Pasadena Hilton.

Kahn's message is that the two cases are tied together quite clearly. He said that in both cases the proprietors, Lotus and AmFox-Tate, respectively, were acting to copyright and a new invention but a futuristic contained structure determined by functionality.

He added that, in both cases the companies should have sought patents, but instead were trying to get exclusive rights to something that in his opinion should not be copyrightable, no more than the placement of the order of the key and letter prints in an alphabetical should be copyrightable so no one else can use it.

Kahn said that, if this litigation proceeds, it could not only change the computer industry, but the entire consumer market could change. Subtly, an appliance manufacturer could say it has a copyright on the placement of the functional controls on an appliance, and other manufacturers would have to make appliances with different controls. Computer chips could be copyrightable because of the functional order in which commands are executed. VCRs, microwave ovens, televisions all have a hierarchy of commands based on functionality and could thus conceivably be copyrightable as such manufacturers would have to make different controls, and consumers would have to relearn each manufacturer's set of controls. Kahn explained.

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22 power disturbances at the points of entry, and 158 at the customer sites. Four of every six where power is supplied by the electric utility and one site is where the computers are located, so fewer than 25 percent of the disturbances occurred here due to line problems; another three constant within the buildings.

Of line underloadings incidents, all were constant under the loadings. Almost exactly half the voltage sags were created under the loading, the others being due to external line conditions, while 59 of 74 voltage sags were

caused by something inside the user's building.

Sags and underloadings cause both system crashes and physical damage, just as do overvoltages and surges.

The National Power Laboratory is conducting a five-year study of power conditions and is attempting to set industry standards for the UPS or uninterruptible power supply industry.

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## Digital To Buy Philips — Subject To EC Agreement

INDIANAPOLIS, THE NETHERLANDS, JUL 16 (AP)—Subject to final approval by both companies' respective shareholders and the European Commission's antitrust and merger laws, Digital Equipment Corporation will take over the troubled N.V. Philips group.

Although final details of the deal

have yet to be agreed on by both companies, DEC has agreed in principle to purchase several of the leading edge technology divisions of Philips. DEC officials are said to be particularly interested in the financial services division of Philips, which supplies computerized equipment to banks and other financial institutions throughout Europe.

Financial details of the take-over bid have not been announced. Sources close to Philips suggest that the final price to be paid has not been fixed and will be dependent on sales figures currently being compiled by both companies' auditors. According to one Philips source, the division of the company in which DEC is interested have a combined turnover of around £1,500 million.

## Altus Tech Support Bulletin Board

BOSTON, MASSACHUSETTS, AUG 9 (AP)—Altus Corporation, developer of PageMaker and other graphics programs, announced at MacWorld in Boston that it will offer engineers access to several of its programs through technical support via an interactive bulletin board system.

Dubbed CustomerNet Online (CNO), the service will offer support from product specialists, downloadable trouble-shooting aids, quick-reference guides, layout templates, macros, disk utilities, clip art, and other products easy and cheap to use. CNO is available to registered owners of Altus FreeHand, PageMaker, Penultimate and Proflex.

CNO is a subscriber service, and allows subscribers access to the Altus Online Database. Online conferencing forums and public forums on CompuServe, Online Database is the resource used by Altus technical support experts, and supports keyword searches. Subscribers can also request product information, request Altus products, subscribe to "Altus magazine," and find out how to become an Altus Trainer.

John Archuleta, Altus director of customer service, said, "Altus is breaking new ground in the software industry by offering an electronic bulletin board designed for all users of Altus products." Archuleta said Online will be continually supplemented as order to get subscribers access to the most current information.

Subscribers will access Online through the CompuServe network using the Altus Information Manager, a derivative of CompuServe's Information Manager. AIM uses pull-down menus, dialog boxes, movable windows, buttons, and a mouse. Altus says AIM is available for both Apple II/Classic and PC-based systems.

Subscriptions to Online can be purchased individually or acquired automatically as a part of the purchase of a CustomerNet/ProMaster/Proflex or Corporate Library service plan. With each plan, users get access to CompuServe public forums, and are credited with 15 hours of connect time

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for 1200 or 1400 line use. Computers equipped with 9000 baud modems have a proportionately reduced number of lines. Use beyond the 10 lines will be charged by Compuserve as an regular connect time.

Freemove Slides is another subscriber service offered by Aldus, at a cost \$199 per year for each copy of the Aldus software, and gives the customer a discount on the price of any major new releases, automatic delivery of updates from files/demos packs sent automatically and other benefits.

The Corporate Library subscription offers more than 40,000 words of free software, and free access to your own account database, the Dictionary from any word, a free enrollment in an Aldus Technical Seminar and other services. The cost of the Corporate Library service was not available.

Brad Stevens of Aldus told Novelties that the Aldus forum primarily on Compuserve will continue. However Stevens described the forum as exclusive, and said the Online service will be more practical. Stevens also indicated that there would be information on Online that would not be available on the Compuserve forum, which he said is an informal service. "Online will be a vehicle for us to go out and actively put information on that bulletin board that we know people are going to want to see."

The subscription rate for Online is \$199 annually to subscribe to Online, call Aldus customer relations at 206-426-2220.



### IBM-PC 10 Years Old This Month

WASHINGTON, DC, AUG 8 (IBM)—The IBM PC, based on the Intel 8086 microchip, carrying a shipping 84 kilobytes of memory and a low density, 5 1/4-inch floppy drive, was introduced to the world just 10 years ago this month.

The first system was unveiled to the press running a Microsoft operating system, MS-DOS 1.0, and making clear to the company was made by IBM except the microchip, case, and the keyboard.

Many industry observers then and now say the microchip was the most important contribution IBM made to help legitimize the fledgling PC industry.

One industry commentator did point out that the deal between Apple and IBM came just before the 15th anniversary of the introduction of the IBM PC and Apple Computer's going public and noted if this was the beginning of the end for both companies.

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## IBM PC—The End Is Near

**ROCKFORD, July 29**—The original IBM Personal Computer is headed toward the end of its line. After ten years of faithful service to the computer community, the value of the original personal computer is fast approaching the level that makes it a donation item. The PC, originally priced as high as \$4,000 in 1981 as an introduction, has recently traded as low as \$200 and is frequently placed for donation rather than sold. "We are running out of people who want to buy these machines for cash," said Charles Thompson, Manager of the Boston Computer Exchange, "and the remaining owners realize that they have driven the machines to a rock and roll lifetime." BGE will be sponsoring an official "Trash Walk" for the PC on August 12, 1991, at BGE's office in Boston to mark the machine's trash destiny and its transition from a viable commodity to a donation item. All McGuffin's books machines are slated to attend. As the PC is displaced into the donation column, the XT showed a new headed in the same direction. With its more processing brains than the PC and many more than a floppy hard drive, the XT is losing its value. The most popular of the XT's closed the week off \$100 at \$200 and buyers are expressing reluctance to buy into such old technology.

## IBM Celebrates PC's 10th Birthday

**WHITE PLAINS, NEW YORK, AUG 15 (NSI)**—IBM has celebrated the 10th anniversary of its introduction of the IBM Personal Computer by issuing a statement containing a retrospective look at the development of the original product.

The statement said, "IBM began development of the PC in August 1980 on a small building at its Boca Raton, Fla. site. The original team of a dozen developers led by Philip D. (Doc) Farago, was given 10 months to complete the project."

"The development team needed to break the rules, to go outside the traditional boundaries of product development within IBM, and they did. They went to outside vendors for many of the parts, went to outside software developers for the operating system and application software, and acted as an independent business unit."

"These changes enabled them to develop and introduce the IBM PC in 10 months—at that time faster than any other hardware product in IBM's history."

"The IBM PC was introduced to the world at a press conference in New York City at the Waldorf Astoria ballroom, as well as several other locations around the country. The IBM PC used the Intel (x) 4.77 megahertz (MHz) 8088 microprocessor—advanced for the time, but slow by today's standards."

"The 5.25-inch disk offered 180 kilobytes (KB) of storage, the equivalent of about 50 single-spaced, typewritten pages. Users could plug the PC into

their home telephones or connect them to an optional microphone or video display. A typical configuration of 64 KB of memory, a single 5.25-inch disk, a color display adapter and IBM Basic Operating System (BIOS) was priced at \$2,000 (about \$3,500 in 1991 dollars)."

The statement concluded by celebrating the decision to market the new system not only through the establishment of IBM Product Centers but also through Computerland and Sears, Roebuck and Co.

*Source: W. Scott Gray, IBM 304-642-5440*

## PC 10th Anniversary—Norland's Kahn Expounds

**SCOTT VALLEY, CALIFORNIA, AUG 12 (NSI)**—Philip Kahn, chief executive officer of Norland International, one of the largest computer software companies in the world, said on the 10th anniversary of the introduction of the IBM personal computer (PC) that the technological changes in the past 10 years will make the decade look like slow motion.

Kahn, whose company is a leader in

object-oriented software technology, said "In particular, object-oriented and revolutionary object-oriented past like microprocessors changed the face of the hardware industry in the '80s."

"The software business is going to undergo a revolution akin to the one that has happened in hardware. The move from transaction to integrated circuits introduced multiplications, compact components that were previously high performance. Object-oriented technology offers three advantages to the software industry," he

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added.

Rubin said for now, his company's focus on compatible-add-onware over focus on Borland's greatest strength, "Emulation as a core service... Emulation is key. With software, we figure that we have about five minutes. If the user can't spend the program without a manual in the amount of time he gets frustrated."

"In the decade ahead, customers will demand software products that integrate and share information. The success of client/server architecture is dependent upon interoperable software applications," he added.

Rubin also thinks that this industry in the software industry to think being the first to market with a product is what counts in fiction. He cites Quattro Pro as an example. "We entered the spreadsheet market years after our top competitor (Lotus 1-2-3), and dominated our market share last year on the technical strength of our product."

"The same has been true for database management software and development tools. Being first brings you a short-term advantage. Being last establishes a very special relationship with your customers," he said.

Rubin termed Borland's approach as developing "kiss of death" products. That strategy seems to have worked. Borland reported profits for the first quarter of fiscal year 1991 as \$77 million, an increase of over 67.4 percent on the same period of 1991. Last quarter of 1991, the company stated profits of \$70 million and a net income of just

under \$0.5 million.

Borland's product line currently includes Paradox, Quattro Pro, QuattroPlus, Borland GDI, Turbo GDI, Turbo Pascal for Windows and Notebook. Contact: Steve Rubin, Borland, tel. 408-429-7000.

### Manual To Keyword Canada's Netcon Conference

**VERONA, ONTARIO, AUG 11 (NS)**—Jim Mical, president and chief operating officer of Lotus Development, will be the keynote speaker at NetCon, a networking and connectivity conference scheduled for September 21 and 22.

Ed DeMichele, marketing manager for these companies, Pearson Publications, told Newsletter that this will be Mical's first major address in Canada.

NetCon will be held in the Automotive Building at the Canadian National Exhibition Grounds. About 100 exhibitors, including Apple Computer and networking companies Novell and Banyan, have signed up. Micalheim said.

Contact: Ed Micalheim, Pearson Publications, 604-927-9942. In 604-927-9427.

### Seybold Pub. Seminar Scheduled For October

**SAN JOSE, CALIFORNIA, JUL 19 (NS)**—Seybold Seminars of Malibu, California has announced its sixth publishing conference, the 1991 Seybold Computer Publishing Conference and Exposition, is to be held at the Jase of the San Jose Convention Center

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The conference, expected to draw 500 exhibitors and 25,000 attendees, has a demonstration area called "Showplace Chicago." The Seybold Gallery where designers show off their work, and individual manufacturers on subjects such as system integration, computer digital photography, desktop color production, and desktop video editing, Seybold said.

Conference registration information can be obtained from Seybold Seminars, 6922 Wildlife Road, P.O. Box 578, Madison, CA 95185, telephone (415) 457-5858.

Continued from Special Section B1 11/9/91  
9450 Tel. 213-657-4355.

## Games Profile in September Playboy

WASHINGTON D.C., AUG. 12 (S&P)—David Rosen writes in his September *Playboy* Magazine profile of Bill Gates, "Bill isn't a 'that's not a normal version to the beaches of Brazil, Bill Gates—the founder of Microsoft—can't stand reading James H. Thompson's book 'Modernism: The Game' rather than playing the looking-beautiful Brazil edition for."

Although not one of the famous *Playboy* covermen, the profile does include photos from a former girlfriend and Gates himself as well as other acquaintances.

The article describes Gates as an "eccentric" although, as one example seemingly cited in showing how eccentric he is, his propensity for watching *Over-the-hill* movies as preference to regular TV fare, seems to be less eccentric than just a sign of intelligence.

## New CD-ROM Discs Make The Top Ten

WASHINGTON, D.C., AUG. 12 (S&P)—Many old favorites are on the second quarter's list of best-selling CD-ROM titles compiled by the Division of Electronic Publishing, a leading publisher and publisher of CD-ROM hardware and software, but there are also three new titles that have reached the top ten.

"Reference Library" from The Software Technology "Magazine Pack" from Information Access, and "Multimedia World Fact Book" from Barnes Development have hit the top ten, with placements of respectively, seventh, ninth and tenth position.

Other top ten titles for the second quarter of 1991 were—on order from number one down: "Windows Electronic Encyclopedia," "Microsoft Bookshelf," "U.S. History on CD-ROM," "World Atlas," "Cambridge Encyclopedia," "Microsoft" (S&P), and "McGraw-Hill Science and Technology Reference" (S&P).

For further information about any of these titles or to receive a catalog, contact Barnes of Electronic Publishing, 541 New Road, Parsippany, NJ 07054 or phone call: 908-261-4768.

Continued from Special Section B1 11/9/91  
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## Macromind's Action! Multimedia Windows Package

SAN FRANCISCO, CALIFORNIA, AUG. 12 (S&P)—Macromind, which is merging with Perceptics another multimedia software house, has announced a Macromind Windows multimedia application called *Action!*

According to the company, the package lets users quickly incorporate sound, motion and animation with text and graphics for presentations. The program comes with dozens of templates and features a Clip Master Library with special sounds, clips, and animated graphics. The product is scheduled to ship in September and carries a suggested retail price of \$495.

Macromind has made its reputation in the Apple Macintosh market, with products like Macromind Director. Its growth has been slow because the Mac represents a small overall part of the computer market. Macromind Windows is seen by Macintosh software developers as a potentially larger market, where their expertise in graphics gives them a leg-up over MS-DOS-based competitors. *Southwest Business Computers*, Menlo Park, 415-442-8300.

## New Macintosh Lite

VICARIE, BRITISH COLUMBIA,

JUL. 12 (S&P)—Moving to appeal to the masses of lightweight laptop and notebook computers, Reticon Technology & Software has launched a notebook version of its content management software, *Macintosh*.

The new *Macintosh Lite* package fits

in a single 13-inch suitcase and sells for \$229.

Laptops and notebooks without hard drives will be "definitely a big market for us," said Tom As, product manager for *Macintosh Lite*, told *Playboy*. He added that the product may also appeal to pro-amateurs and amateurs.

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between the Macintosh environment and the DOS environment were just a matter of using the mouse or the shift keys and moving the screen over.

One note, to get the Macintosh operating system to look at the PC 3.5-inch disks, the F1 key had to be pressed. Normally on a Macintosh, once a disk is inserted in the drive the drive sends a signal and lets the operating system know the disk is there.

The Macintosh operating system does not come with the Audio Card and would have to be purchased separately. However, Word for Word word processing software and Disk Manager Mac is included with the card. The Audio Card also has a small, portable speaker that comes with it and plugs into the card to provide the sound capabilities of the Macintosh.

A minimum of 2 megabytes of RAM is required to be placed on the Audio Card in the form of 1 megabyte 512Kbit, with a 64K minimum provision. Contact Midas Data, Seven South Avenue, Box 113044, 05511.

## Windows Image, Audio Compression

CAROLINA, N.C.—Opticon has announced new tools for image and audio compression. Opticon's for Windows 3.0 and the Audio compression board.

Opticon is a software developer's kit for programming a Motorola digital signal processor (the 56800 DSP) that is

on the Opticon 180 and 180 compression/expansion add-on boards for compression and expansion of images and audio, the company said.

Opticon says its Opticon is better because it provides the right compression/expansion tool for the right job. Compression of images and audio is an important issue, as a means of compressed video can take a property of that issue, Ray Harris, vice president of marketing for Opticon said. "The main issue in compressing images and audio are file size and integrity."

"No compression is necessary, data is lost and integrity is compromised. Images, voice and music do not share similar qualities, and not all compression/expansion algorithms share equal capabilities. Maximizing integrity depends upon choosing the correct algorithm for a specific type of image."

Opticon says its Opticon product does just that with four types of compression/expansion algorithms. The four are Joint Photographic Experts Group (JPEG), for simple continuous tone images, H.261 for continuous tone images mixed with text. Lossless for absolute image integrity with compression up to 1:3, and Voice and Music that enables the addition of music to most applications.

Adding voice to music to applications that already include image storage and received is where the Audio compression board comes in. "Audio for DOS and Windows-based PCs (personal computers) makes adding voice to music to an application a simple matter

of writing Cinepack calls in the program. We are providing the encoding technology for a range of customers, from PC modems to telecommunications and media companies," said Harris.

One of the biggest applications for the new technology is desktop video conferencing. Harris said, "The 1989 market for desktop video conferencing alone was \$400 million, a figure we project will rise to \$1 billion in the next four years."

Opticon says the board handles both digital and analog conversion, software handles file extension distinction, and can compress at rates as high as 1:8.

Contact Ray Harris, Opticon Tel 919/714-6700.

## 119-Channel TV Add-on Board

TORONTO, ONTARIO, AUG 4 (ME)—Avisco Technology has announced DesktopTV, an IBM-compatible add-on board that turns the computer into an enhanced television, the company said.

The board is capable of receiving 119 channels, allowing VHS, UHF and cable TV channel selections, as well as Videotext, VCR and other RF modulated NTSC inputs. Controls for the television are operated from the keyboard, and the sound is delivered by an external speaker which is included with the board.

"This is the first time a full-range television option is being offered for

the PC for under \$400," said Dan Marshall, the company's president.

"I believe that we are opening a whole new world of desktop video applications. There are a wide number of possible applications for the board, from security and surveillance applications to distribution of training programs within a corporation, or for entertainment," he added.

The product has been developed as multiplatform and VGA version. It is available direct from the company for \$399.

For more information, call 916-312-4555.

## Autodesk Animator Pro For Multimedias

BALTIMORE, CALIFORNIA, AUG 1 (ME)—Autodesk is shipping its new Animator Pro software package, a three-dimensional (3D) software package for the IBM personal computer (PC) 386 and 486 or compatible computers.

With screen-resolution independent, animated calls and advanced drawing, text handling and page features, Autodesk says Animator Pro gives graphics and video professionals real-time animation capabilities.

The company says Animator Pro is a multimedia product, a step up in capabilities from the earlier Autodesk Animator software, but does not have three-dimensional (3D) capability. Autodesk 3D Studio software has.

The Autodesk Multimedia Division, the division producing Animator Pro, was created last August and has since

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"DOS 4.07" Russian, Chinese,

European French, Spanish

Model	Keyboard	Keyboard	Keyboard	Keyboard	Keyboard	Keyboard	Keyboard
PS-2001	Omni-101	Omni-102	Omni-plus	Omni-103	Omni-104	Omni-105	Omni-106
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duced Autodesk 3-D Studio. The 3-D Studio offers 3-D modeling and animation and also requires a 386 or 486 PC.

The company says the new multimedia element has expanded market share to over 300 Authorized Multicomputing Dealers.

Autodesk is perhaps most known for its package AutoCAD, available on PCs and workstations and used by engineering and drafting professionals for computer-aided design (CAD).

Autodesk Pro costs for \$795, the company said.

Contact: Kathleen O'Leary, Autodesk, Tel. 415/493-8011, Fax 415/493-1400.

## Microsoft Acquires X86 Software Simulation Rights

REDMOND, WASHINGTON, AUG. 21 (ENR)—Microsoft has announced that it has acquired a non-exclusive license to Insignia Solutions Inc.'s software emulation of Intel x86 based PCs. Terms of the agreement were not disclosed.

Insignia Solutions markets iAPPC, which allows DOS-based applications software to run on non-x86 based computers. Meanwhile, there, and SPARCStation versions are available. Insignia also markets AccuWin, which runs DOS data and displays the data as icons on a Macintosh.

Insignia's technology recreates the IBM AT environment using proprietary software, and the license gives Microsoft the right to incorporate that technology in future product offerings.

Asked about the specific extent of Microsoft's acquisition of the emulation technology, a spokesman for Microsoft said Redmond said that the company had acquired the rights for future use, not for a specific purpose at the present time.

Answering the deal, her Spokes, Insignia Solutions' VP of sales, said, "We believe Microsoft's implementation of software emulation will be the most innovative in the marketplace."

Steve Ballmer, Microsoft senior VP of systems software, said "With the help of

Insignia's technology we can provide customer investment in MS-DOS and Microsoft Windows environment applications in our future system software products, on both advanced workstation systems and on other platforms."

Insignia, headquartered in High Wycombe, England, employs 150 staff with five U.S. marketing offices and support offices in New York, Columbia, and Andover, Massachusetts. The company, which was founded in 1985, was initially funded by a consortium of British and Israeli venture capital firms. In 1990, Insignia Solutions reported revenues of \$5 million.

Contact: In Signia, Microsoft, 276-8543 or 276-2942, Insignia Solutions, 415-493-8001.

## New Graphics Board Makes Windows Twice As Fast

SANTA CLARA, CALIFORNIA, AUG. 21 (ENR)—Acix has announced its new Tiger 16 video graphics adapter (VGA) board for corporate users of DOS and Windows.

The company claims that the new board doubles the speed of running Microsoft Windows, making more the quality of the video image displayed.

The Tiger 16 displays up to 256 colors simultaneously, creating photo-realistic images, company officials said. The speed comes from a graphics processor that makes screen displays faster in line. Reduction of buffer also occurs with a screen refresh rate of up to 60 megahertz (MHz), the company claims.

Acix officials added that the 100 percent acceleration is carried out using a proprietary Windows driver in combination with technology from Texas Instruments.

The new card offers resolutions from 640 x 480 dots per inch (DPI) to 1,280 x 1,024 DPI. For higher quality images Acix said that the Tiger 16 can process resolutions of 1,280 x 10 (noninterlaced) images. Interlacing is essentially projecting two screen images over one another to get an effect. Noninterlaced images are sharper and have more color, producing a crisper, more realistic

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to image.

Asus and that the Tiger 10 need is suitable accordingly and comes with the board, a sufficient chassis bracket for plug, ribbon cable and manual. The Tiger 10S is shipped without the bracket, plug and ribbon cable. Prices range from \$299 to \$350 depending on the capabilities of the card.

Circle 11 and System Area, Tel: 408-986-1485, Fax: 408-986-1554

## Norton Desktop For Windows

CLEVELAND, CALIFORNIA, AUG 3 (PR)—Symantec has announced the Norton Desktop for Windows product has begun shipping.

Symantec claims the product allows users to copy, move, view, launch, delete and print files. Files are printed by dragging the icon for the file to the printer icon, moving by dragging the file icon to the moving icon, and copying and other functions are accomplished in the same manner, the company said.

The viewing supports all the major spreadsheet, word processing, database and graphics file formats including: dBase, Lotus 1-2-3, WordPerfect, Microsoft Word, AmPro, dBase, PCIS, BMP, GIF and TIF, the company said.

The company says the product also

includes an automated data backup, data recovery and network support. Background operations is offered so backups can be run while the user is working, and a Norton scheduler allows backups and other routine activities to be run unattended at preprogrammed times, Symantec said.

The Norton Disk Doctor for Windows is included in the product and allows users to diagnose and often solve common disk problems, Symantec said. An Emergency Disk allows users to repair, reformat or optimize disks and recover deleted files even when Windows cannot be accessed, the company claims.

Furthermore it also includes and contains Uninstall, a utility for recovery of deleted files, the company said. Other utilities include SuperWait for searching for files, Search Builder for creating Windows search files, Icon Editor and Extension for creating and modifying icons, KeyFinder for putting unusual characters or symbols for use as shortcuts, Manager for screen blanking with user defined screen displays, and Launch Manager for starting any Windows or DOS program from within any application currently in operation.

Norton Desktop for Windows does not alter the look or feel of Windows, Symantec said, so users do not have to be concerned about another "program layer" on top of Windows.

The Norton Desktop for Windows runs for \$149 and includes The Norton Backup which is a stand-alone

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designed by Dan Szymanski, Toronto, Tel. (416) 461-1000, Fax (416) 461-1001.

#### Borland Shows Off New Functions In Windows Products

PASADENA, CALIFORNIA, JULY 25 (ENR)—Windows got a much problem of Borland's new Windows products, including Paradox for Windows, ObjectBase, and Quattro Pro for Windows presented by Philippe Kahn in a special morning of the Pasadena IBM Users Group at the Pasadena Hilton.

Kahn talked about the importance of object orientation, saying "Object orientation will be to the software industry what microprocessors were to the computer." Borland sees object orientation as essential to the industry and has made some logical, but new, organizational investments in its Windows products.

Kahn said that part of the concept of object orientation is how you are being, meaning the structure of the data inside the program. Kahn said object orientation should be done in such a way that users do not have to be concerned with data formats, but the user should just be able to start a program and use data from any other program.

given. That data structure handling should be done internally, by the objects themselves, he added.

In Borland's database products for Windows, Borland doesn't believe in a "native" database, and has done what Kahn called "database promiscuity."

Kahn added that Borland has already scrapped Relational Time's proposed plan of making ObjectBase compatible with dBASE IV if the rule goes through. Data from any database program can and should be available to any other database program, he said. That connectivity is planned for Borland's database products. "Users should be able to choose a product based on the product, not the format of their data."

The only way the data is transportable between applications, but Kahn said programmers will be able to create applications that run under Windows or DOS with the same source code, automatically. Kahn added that Borland took no costing SBT database applications, and with an modification of the source code, moved it into a Windows application.

Kahn demonstrated a part of ObjectBase called the Resource Workshop, in which a user could create Windows menus in a non-Windows application and modify accessible files without having the source code.

Considering it another concept introduced in the new Borland Windows products, just as when a glass of water is moved and the water in the glass moves with it, so when objects on the screen are moved, any icons within

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icon is a Borland Windows product will move with all the functionality attached, when the icon is moved. In a button mode a key that executes a menu to sit the Windows in Quattro Pro, will sit in the same place relative to the box, with the same functionality, when the box is moved, Kohn said.

The Windows version of all three Borland products, Object Manager, Paradox and Quattro Pro had full desktop publishing capability with word processing and graphics. All three were

demonstrated on industry standard computers, either a 486/50 or a Tandy 1000 portable 486/50 computer and performance appeared to be very good.

Kohn made much of Borland's use of the right mouse button. Rather than the right mouse button being used as a duplicate of the left, the right mouse button in Borland Windows products, when clicked on an object, brings up the set of choices available for that object.

Kohn said that Borland's use of the right mouse button for allowing the user to make changes to an object similarly, in control, is planned for all Borland Windows products.

The three Windows products were not given a definite release date, but Kohn said all would be released in less than nine months. Paradox for Windows is expected to be released first, and Kohn said it was very close to release.

Contact: Philippe Kohn, Borland, Tel. 408/456-4000 Fax 408/456-5271

### Borland's Quattro Pro/Paradox/Windows Upgrade Plan

SCOTT VALLEY, CALIFORNIA, JUL. 19 (ENR)— Hoping to ensure a future share of the Integrated Windows market and the database management system market in the same time, Borland International has introduced a new upgrade plan, called the Pumpkin Program, which guarantees special upgrade pricing to the Windows ver-

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units of its Quantum Pro 3.0 and Paradise 3.0 products.

The plan applies to anyone who purchases and registers their Quantum Pro 3.0 or Paradise 3.0 products after July 1.

Anyone who purchases a full retail upgrade, competitive upgrade or LAN Pack version of Quantum Pro 3.0 after that date is eligible to upgrade to Quantum Pro for Windows (or the next DOCS version of Quantum Pro) at the special Prospect price of \$495.

Additionally, the company says that anyone who purchases a full retail upgrade, competitive upgrade or LAN Pack version of Paradise 3.0 after July 1 qualifies to upgrade to the Windows version (or the next DOCS version) of Paradise at the special Prospect price of \$329.95.

Doing Antares, senior vice president, worldwide sales at Portland, said, "By investing in Realtek's software today, (customers) are guaranteed the next upgrade version at a significant savings."

The company assures that customers must register their Quantum Pro 3.0 or Paradise 3.0 products to qualify for the Prospect Program upgrade pricing. Registered users will then receive advance notification when products become available, confirming the special Prospect upgrade price.

The promotion will be applicable only on Windows or DOCS upgrades available by March 31, 1992.

Portland recently announced another promotion concerning Quantum Pro 3.0 and Paradise 3.0. In that promotion, which runs until October 31, 1991, anyone buying the \$495 retail version of Quantum Pro 3.0 or the \$399 version of Paradise 3.0 can get a free copy of the company's Realtek 3.0.

Contact: Realtek International Inc., 408-885-1504

## Microsoft UK Reveals Plans For OS/2 And Windows

LONDON, ENGLAND, JUL 29 (RE)—Microsoft is actively encouraging users of OS/2 to migrate to the Windows environment, despite the fact that the software house is committed to developing OS/2 V3.0 for IBM. At the same time, Microsoft has lined up its plans for the next generation of Windows, which it calls Windows New Technology, Windows NT for short.

Senior officials with Microsoft UK today outlined their plans for OS/2 and Windows, explaining that there are really two Windows. According to David Newman, Microsoft UK's managing director, "There is a lot of FUD (fear, uncertainty and doubt) out there" in Windows but he said he does not like FUD. "Business has been doing the rounds in the U.K. We're going to do the same in the U.S.," he added.

Newman said that UK sales of Microsoft software are rising high. "They're better than the year before. This makes us the largest software company in the world," he said.

Dave Smith, UK systems manager with Microsoft, said that the company's strategy is now to sell and support Windows as a big way "Microsoft Windows is the strategy we are embel-

## NEWSBYTES

ing on," he said.

Smith went on to say that Microsoft is also planning to actively encourage OS/2 users to migrate to Microsoft Windows. This is despite the fact that Microsoft is committed to developing OS/2 Release 3.0 for IBM. "It's important to ensure OS/2 users migrate quickly to Windows," he said, adding that Microsoft is working hard to migrate OS/2 users to the Windows environment.

IBM, he said, has not made it clear what is happening with OS/2 version 3.0. This has resulted in a considerable amount of speculation as to the future of the operating system.

Microsoft is hoping to lure OS/2 users over to the Windows environment with the promise of Windows NT. Earlier and current editions of Windows (3.0 version 3.1) have been graphical user interfaces (GUIs) overlaying onto a DOS base. Windows NT, and Microsoft, will be a Windows operating system on its own right, without the need for the user having to boot from OS/2 or OS/2.

Windows NT is now an option for a 1686 release Version 3.1, meanwhile, is being readied for release before the end of the year. Microsoft officials refused to be more specific on these claims.

Features of Windows NT include support for multiple platforms, including i386 and RISC microprocessors. Multiple DOS sessions, and the ability to emulate a DOS session from within the Windows environment without having a copy of DOS (see 07/29/91).

## Buttonsware's PC-File 3.0

BELLEVUE, WASHINGTON, JUL 8 (RE)—Buttonsware has released PC-File version 3.0, an IBM-PC-compatible, file distribution.

Buttonsware says the program is easy to use and offers a Windows-like interface with desktop, menu bars, pull-down menus and dialog boxes, but without the heavy RAM (random access memory) and disk requirements that Windows products require.

PC-File 3.0's menu structure has been redesigned to add pull-down menus, and has the option to run in character mode. It can locate files on any drive or directory, and supports the use of a mouse. Help screens have been expanded to allow users to scroll through detailed information, and personal comparisons help screens are available.

PC-File sells for \$19.95 in retail version, and registered owners of earlier versions can update for \$9.95. A LAN version is also available with a five workstation license for about \$250. The new program is not available in shareware, but earlier versions were. Contact: Joe van Winkle, Buttonsware, 204-424-9470 or 204-424-9110.

## HP Intelligent For Windows—Free

GREELY, COLORADO, JUL 26 (RE)—Hewlett-Packard (HP) is offering an HP V3 conversion kit for HP Intelligent for Windows 3.0 free, just for

the editing.

HP says the IntelliWrite/Windows software comes with matching screen fonts for the 60 Times and Univers fonts that come with the HP LaserJet III, IIIiX, HP or HPa printers. The new software also allows the user to create matching screen fonts, without leaving Windows, for any HP accessory printer together with the user team to add, the company said. Font editing conveniences allow the user to set exactly what is printed, not just an approximation, full of jagged edges, for when presentation programs (PPT/PPPT) printing of documents.

HP and IntelliWrite/Windows allows background printing and allows the user to change fonts on-the-fly, without pausing and without leaving a Windows application.

IntelliWrite/Windows 3.0 requires an HP LaserJet III family printer, at least an IBM AT or compatible personal computer (PC), with a high density 5.25" or 3.5" floppy drive, 1 megabyte of random access memory (RAM) and Windows 3.0, HP said. As a side note, Windows must run on Standard or Enhanced mode, which requires 1-MB of RAM—and needs to be not supported.

The company has set up several ways for HP users to respond to the offer for

IntelliWrite/Windows 3.0. Users are invited to call (800) 553-7656 or fax their request to (800) 303-4197. Users can also send their request to Hewlett-Packard, P.O. Box 4754, Denver, Colorado, 80501-0754. Some users are receiving an invitation by mail to obtain the new screen font software.

Hewlett-Packard also said it is also creating users who request into a drawing for an HP writable typewriter product. But, of course, it's for a limited time only.

Contact: Gail Lyman, Hewlett-Packard, Tel: 303-553-7800, Fax: 303-553-4032.

#### Problems with DOS 3.0

LOS ANGELES, CALIFORNIA, JUL 18 (ENR)—All new software seems to be plagued with problems and Microsoft (MS) DOS 3.0 is no exception. Problems with accounting packages, disk utilities and network software seem to be the major sources of grief for some Los Angeles and San Francisco-based consultants.

Steve Bann of Amicus Consulting Services told Hensley that his DOS 3.0 had his upgraded to it on the option of several of his customers without mishap. However, with a client running AutoCAD, an accounting package,

the backup program would no longer work, Bann said. He used the "Set Ver" command programmed in the documentation—a command which is essentially a "fix" to the software so the software thinks it has the version of DOS it is expecting and keeps running. Bann said it didn't work, and he had to give up and reinstall DOS 3.0.

A technician at MS Tech Support confirmed that several accounting programs have difficulty with DOS 3.0, including ProShare and AME.

Mark Florence and Fred Gault of the Canyon Company in San Francisco found his services problems. Florence said upon installing DOS 3.0 on an IBM PS/2 Model 7 the DOS still locked up completely and the machine had to be completely powered off. On

another AT clone IBM compatible computer the still had no color at all on a color monitor. In both instances they gave up and uninstalled the software. "We don't have time to mess around with it," Florence said.

Users can also expect problems with hard disks low at high level formatted, or partitioned with software that "doesn't follow MS standards" and on MS support tech, who named specific software titles, including SpeedStar and Chemtrak's Disk Manager.

Users who call MS Tech Support should be prepared to be persistent and to wait. It took Hensley 15 calls over a 1.5 hour period to get through, and 10 minutes of waiting once the phone was

(Continued on page 47)

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"Failure" is when something goes wrong. Hard discs crash, files don't copy, printer heads break, modems don't connect, and on and on and on. Experienced computer users know bugs are part of using these computer systems.

"Success" is when things go right. The computer runs smoothly doing what it is supposed to, talking that nice calm, professional voice all day long. Things will go right some of the time, even most of the time, but not all of the time. Over a long enough run the law of averages will catch up and high-tech computers and computer components will fail.

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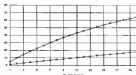
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# Failure Index



Testing negative after performance and resources and the cost must be passed on to the buyer.

Testing may not be as important in experienced computer users or to those buying only one component at a time in addition to an existing system. Individual components from different manufacturers are usually produced in a good quality control environment. Experienced users are less likely to spot the subtle defects that they get out. For these buyers, mail order or large-volume discount dealers may provide best value for the dollar.

Complete systems from a single manufacturer form a single production unit. For example, a portable computer from a major manufacturer (Sharp, Toshiba, etc.) will be manufactured and tested to that company's good quality control standards. Though it doesn't hurt, double testing is not as necessary for these items.

Novice computer users buying a new component PC system are at the other extreme. They may lack the experience to recognize poor performance, or may just sit down to find out lack of experience. If they do find a defect they can have an absolute explanation of it to the dealer to get it serviced under warranty.

For these buyers it is more valuable to choose a dealer who tests the equipment for them. It costs more in retail markup but is likely to save money and problems in the long run. Remember that the assembled components were manufactured to an adequate quality control standard. The truth showed that it is when they are all put together into a PC that the quality control standard drops just the point where the chance of getting a defect in a system is too high.

Dealer testing and service, replacing or replacing of components re-establishes a good quality control standard for component PC computer systems. In the unregulated PC market it is the dealers who provide the quality control standard the buyers receive.

## Buyer Beware

There are good reasons for new buyers to choose a dealer who thoroughly tests and replaces a new component PC computer system before the buyer takes it out the door. Remember the way the probabilities worked out. In a multi-component system, there will be between one chance in ten and one chance in three that there is something wrong with it somewhere.

## Summary

Today's PC computer system are made up of different components from different manufacturers. Each component is probably made in an adequate quality control standard by its manufacturer. But the statistical effect of putting many different components together into one computer system causes the quality control to slip sufficiently far below an acceptable standard.

Dealer testing and service establishes a good standard of quality control for component PC computer systems. A reference for the information in the article is:

*Statistical Quality Control Methods*  
 Irving W. Burr  
 Statistical methods and measurements, vol. 1  
 1976, Marcel Dekker, Inc.  
 Gooden Young can be reached at 255-1735.



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# OmniPage Professional

by Melissa Russell

Product: OmniPage Professional 3.0  
Manufacturer: CALS (Corp. 1000 Campus Court,  
San Bruno, CA 94066), 408/595-7000  
System requirements: IBM PC, with Windows 3.0,  
80486 hardware, 4MB RAM,  
PostScript (software only)  
Features: supported devices, Brother, Canon, Pire,  
HP, International Microfilm, Microfilm, Parafilm,  
Soft, Time, Union, the Wang, and more.  
File formats supported: Adobe, Composite, EPS,  
Illustrator, Pire, and Postscript, Quark, and  
TIF. \*\*\*\*\* (see below)

"Optical character recognition (OCR) is often described as the answer to all input problems. And so it should be. The ability to input text into word processors format without typing is well worth its weight in gold...if it works."

What I wrote two years ago still stands. Besides, *Review of The Computer Paper* may remember last year's review of Macromed's OCR software, "Learning for Text Recognition," published in the September 1989 issue. At that time, we reviewed four different OCR software packages. Our conclusion was that OmniPage for the Macintosh was by far the best product in its class.

Today, OmniPage Professional is available for the Windows 3.0 environment. Based on the performance of the Macintosh version, we would certainly expect similar results for OmniPage for Windows. The answer is yes! If anything, performance for OmniPage Professional contained OmniPage for the Macintosh. The simplicity of this software has continued any other OCR software we have seen in this. And the resulting output is of extremely high quality. Let's examine why.



OmniPage recognizes text by identifying text blocks on scanned pages

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Continued on page 50

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## How does OCR work?

Basically, Optical character recognition means having a software product linked to a scanner. Take a piece of paper with text on it, place it on the scanner and send it. Later, after the words in a word processor. It should be as easy as that.

Well, it's not, not exactly easy. The problem with reading text is that not all text is the same. Some of your output may be in a variety of languages, some of it may be in block form, some may be in lower case text form, others may be in dot matrix form. Each of these different types of documents



OmniPage Professional can automatically scan text in any of 25 different formats.

challenges the OCR software to produce different types of text.

Even more, however, of OCR software know that these situations will arise in any given office. But most users, usually, that not all of these situations will occur in each office.

To overcome the problem of making a software product which reads everything, this method uses a matching system. This means that the software matches a series of dot patterns which form the character (font) to a library of character shapes stored inside your computer. If the shapes match, the letter is identified. If not, an error character is inserted.

The problem with this method is that only a small library of characters are shipped with the product. If the rest of your office needs is not contained in the character library, you will need to build

Continued on page 50



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Continued from page 49  
your own. This means that you need train your software to read your particular documents. This method is fine if you only have one specific type of document, but what happens if you have dozens of formats? That's where OmniPage Professional comes in.

In GARET's own words, "Generating a bit-map to ASCII code might seem simple, since our humans have been recognizing text for most of our lives, but to the computer it is an



OmniPage Professional offers several test formats and sophisticated scan controls.

easy fix. OmniPage, a page-recognition program, uses revolutionary OCR technology that analyzes individual character features (distinct-matrix) rather than matrix shapes (matrix-matching). And believe me, it works! OmniPage read just about anything we put to it. It read it right and it did it within seconds. Its training was flawless. Better yet, OmniPage trains itself. We found that the more you read the same text formats, the faster OmniPage reads it. It read anything from newspaper text (from a

typewriter or daisy wheel printer) to full column printouts to fixed pages to magazine articles. And it read it with an accuracy index of between 80 to 95%. These results are hard to beat.

### Installing and Using OmniPage

OmniPage Professional requires a 386 PC with 384K of RAM and Windows 3.0 installed. You can run it on a 286 AT, but you need to purchase a co-processor board along with the software. The price of the hard drive (about \$100) makes it worthwhile to get a 386 computer. Installing OmniPage Professional is a simple installation as performed through Windows. Select a directory for OmniPage, select the file formats you need, select the scanner you use and insert the appropriate disks. The next step is to create a window template (a template is a special hard disk section which Windows sets in enhanced mode to store temporary information). This step may be confusing to new Windows users, but instructions are clear and simple in the OmniPage manual.

Once this is done, run OmniPage. Making sure the scanner is turned on, choose Scan from the Process menu. Set your Scan/Recognize settings and click OK to begin the recognition process.

In its simplest form, scanning with OmniPage is very straightforward. If your scanner includes a sheet feeder, load it up, let OmniPage in automatic mode and automatic spell check and go for lunch. When you come back OmniPage will be finished.

If you prefer to work in interactive mode, simply change the settings. OmniPage will let you choose interactively which portions of each page you wish to recognize. This process is more time consuming, but sometimes offers better results (less garbage in the text such as borders and footers, etc.).

OmniPage is the best OCR software package to choose today. It is easy to install, simple to use, fast, and accurate. The type of text which can be scanned through OmniPage includes just about anything you can think of from mailing lists to spreadsheets to encyclopedias. OmniPage supports 35 different text formats from ASCII through Lotus 1-2-3 or Microsoft Excel through just about any word processor. The only real disappointment with OmniPage is that it does not include a Word for Windows filter, though it does include a Rich Text Format filter which can be converted to Word for Windows.

Anyone who owns a scanner and Windows 3.0 should seriously consider getting OmniPage Professional. With an investment throughput it will easily pay for itself in a matter of days if not hours.

The Rating Scheme is based on a scale of 1 to 5. The percent performance scores 1 star while the highest receives 5 stars.

Markus Reed is a writer and consultant with Franklin, Intelligence, an Ottawa-based publishing consulting firm.

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another). For example, you can put your walls on one layer, your windows on another, and your dimensions on a third and then work on each layer separately and plot your drawing using a different pen thickness for each layer.

- **Graphic entities** (also called **primitives**) such as lines, arcs, circles, etc.
- **Manipulation** commands such as copying, scaling, rotating, etc.
- **Editing** commands that allow you to trim, extend, stretch, etc., etc.
- **Some way of moving around** if your drawing is too small to fit, panning (moving around) or zooming means. This is very important because it can get somewhat frustrating to be working on a large complex drawing on a small computer screen.

- **Blocks/templates** (basically used, often used drawings or models) that will be repeatedly brought into the drawing.

- **Some sort of dimensioning** means. If there is one sort of CAD that will actually work as a dimensioning, associative dimensioning (which changes the dimension automatically to reflect changes to the drawing) has certainly helped, but CAD is still waiting for that dimensioning program that makes computer dimensioning as easy as hand dimensioning.

- **Utilities** such as file and plotting means. You should also be able to create DXF files (the most commonly used conversion utility) which allows IBM-produced CAD drawings to be compatible with other CAD software.

This list is by no means all encompassing but it does represent features that every CAD package should provide and that should be compared when checking out different software.

#### Low-end vs High-end

CAD software is divided into two very general groups, high-end and low-end. High-end CAD starts at about \$2500 and goes up from there. These programs are quite complex and it usually takes quite a while to master the program. Also usually associated is a fairly advanced programming language so that you can tailor the program to suit your needs.

Most high-end CAD systems also offer a 3-D program, but you have to check if it is included in the program or whether it is a separate module for which you will have to pay extra. If you are interested in doing some computer modelling then 3-D packages are quite expensive, especially when you add some shading and a perspective view.

Low-end CAD sells for around \$200 and under. A few years ago an average CAD user would have considered these packages but that has certainly

changed. Recent versions of the 3-D version of some low-end CAD packages have menus and commands that rival their more expensive counterparts, although without many of the more advanced features. They are, however, still produce exactly the same end result. Learning curves tend to be shorter as you can be producing professional drawings in very short order. But instead of an advanced programming language, most low-end packages make do with macros, which allow you to string together a series of commands which can then be initiated with a single keystroke.

Low-end CAD companies are also starting to offer some fairly advanced 3-D packages that, although they can't compete with high-end CAD, are very capable of producing professional looking models.

#### Hardware

Hardware needs will also dictate which CAD program you will end up buying. Some low-end CAD packages will work on an inexpensive 386 with 44MB memory and graphics monitor. The more costly high-end CAD systems need at least 386 with lots of RAM in two properly. You will also have to consider buying a color monitor so that you can enjoy different colors as inputs in line drawings so be able to differentiate between them on your monitor.

Most CAD programs also need a math co-processor without which the program would simply be too slow to use. There is however CAD players supporters of lines or arcs and calculates the distance between them (known as the vector format), as opposed to most point and draw programs, which simply store the position and color of a specific pixel (known as raster), thereby creating a lot of numerical processing.

You will need either a monitor or a digitizing tablet of some sort. A monitor works well with most high-end low-end CAD and is considerably cheaper than a tablet. A digitizing tablet allows you to be more efficient tracing, as well, it provides a means means of connecting blocks, but keep in mind any function on a tablet is also available through mouse and/or a mouse.

You will need some sort of output device, usually a printer, although many printing companies on town provide a plotting service if you can't afford a printer yourself.

This is by no means a completely comprehensive review of CAD but it is very helpful in how some sort of an understanding of CAD and its relationship to shading before you go on and that with the software.

**Ed Tachibana** runs a CAD consulting business and creates illustrations. Contact him at (504) 322-8420.



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# Disk Punchers: are they safe?

by George Bissell



If you use an AT-class machine with a 3.5" drive, is a Single-Density-equipped Mac, you may have wondered what the difference between Double Density (720k for PC and 800k for Mac respectively), and High Density (1.44MB) disks is. Most people think that there are only two significant differences, price, and that some three-hole opposite the write-protect hole. Now on the market are drives that promise to save you money by allowing you to use regular double-density disks in HD drives. These products, essentially specialized hole-punchers,

are available by the brand names Disk Wizard (see figure 1) and Double Disk Converter. To use a regular disk as an HD drive, just cut an extra hole in the upper left corner, and introduce it with double storage capacity. Hooray! What's the catch?

There is an additional difference between regular and high-density disks in the coating that magnetically stores your documents and programs on that disk. The magnetic tape on the coating of a 1.44 MB disk causes demagnetization more strongly than the magnetic film on a 720k disk do.

Recent research has shown that, in contrast to demagnetization, in which, as it turns out, the coercivity of a 720k disk is 800 oersteds, whereas the coercivity of a 1.44MB disk is 720 oersteds. Because the highest density disk must pack the magnetic bits together much more closely, its resistance to demagnetization must be higher so that they don't demagnetize each other. Experts note that hopped-up disks are more susceptible to this loss, a month or more down the road.

In *Change Computing*, George Denno writes that "for coercivity, the ANSI standard requires a minimum of 800 oersteds for high density disks. All major disk manufacturers produce their double density disks at no less than 800 oersteds. Therefore, while this more-or-less proves that the disk-punching technique works, the fact remains that the high density disks are rated at a higher coercivity level, hence, may be expected to suffer less long-term magnetic data corruption. Further evidence that the magnetic media is not, in actual environmental terms, "essentially the same" is the fact that I have personally tried to format almost brand high density disks on regular-density drives without success. Without doubt, "in essence, brand" high density disks are truly high density media is not only right.

In my own tests, we had no trouble with disks hopped-up with Disk Wizard (aside from putting the disk into the drive sideways instead of upside-down on the first try, having to walk a certain hot hand-in-hole in the wrong place). If you are looking for the best of HD disk drive, perhaps out of these products is for you, George Bissell.

Incidentally, disk punchers for single-sided disks (used by earlier computers such as the Commodore 64, Apple II, Atari and other machines with single-sided disk drives), suffer from a different problem. Because they lay double-sided 5.25" floppy disks, the correct reason, why not use both sides? For that matter, even if a disk is only certified as single-sided, generally both sides are probably usable, with no difference in density, or coating.

To use the "other side" of a single or double-sided disk on their single-sided drive, hopped-up-and-computerized simply take a hole punch on any number of handy punches that can cut a notch in the disk's protective material. This provides a, usually a floppy disk's write-protect, the actual magnetic diskette is inserted between two pieces of tape material, similar to the way leaders of a Universal Film Remounting Panatomic film, or whatever these things they sell in E-Marts are called. They lay holes into the disk, then use magnetic media particles and mount them in the direction of the spinning disk. Unfortunately, when the would-be faithful flip the disk over, the brushes are suddenly sweeping in the opposite direction, and all this debris becomes dislodged, and ends up you-know-where. Wham.

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by Thomas Pe

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After reading that and running the line-by-line tutorial, I felt oriented and ready to easily create a fancy-looking application shell. To make it perform much more, though, it is impossible to avoid the reality of low-level programming, which is not low-down. Plus, on spending all hours in sweat and getting to know the system.

For those experienced at another language, the Visual language is very easy to pick up, since Microsoft provided a very readable user to it. The advanced features are packaged into reference chapters following the



intro, which can be read on an accelerated basis. The manuals are writing and explain with examples.

### For the Merely Lazy

The standard Windows Help provides a very complete online reference with plenty of examples which can be copied and pasted into your program.

The main weakness to the Windows Help system is the absence of a full text-oriented strategy. It relies instead

*Continued on page 52*



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on pre-built hypertext links. There is an example containing the Floodfill function, for instance, located under the HIC topic. There is unfortunately no way you can search for Floodfill. In contrast, Help has a topic called "Show To" which is an incredible list of anything you could possibly dream of. I looked for a "Functions by Programming Task" table, though it is there in handbooks in the Language Reference. It would be nice if it were online.

## Fools Welcomed

For both novice and experienced programmers alike, Windows makes the initial stages of a project much easier than it would be otherwise by providing defaults and associative cues (all kinds, of course) to jog the space between the ears. It is as simple as pointing the mouse around and dragging a bunch of small buttons, checkboxes, and what not, into a containing window, which they call a "form," and you're got yourself a form but the prototype.

Those who like programming by looking will love the interactive, enterprise environment where explanations are nearly pointless. It is not even necessary to declare local variables (boring, isn't it?) When you think you've got something that works, you can produce an EXE runtime with a click of the mouse.

## Big Boy's Think Twice

The downside of this Windows is that large-scale development with Windows may be questionable. For example, a form is not limited. It must become a visual change to the conceptual development exclusively within the Windows development environment. This is bad news for serious software developers. To mitigate this constraint, it is possible to choose to let the Windows code that operates on these forms, edit them, and embed them back into the Windows environment.

Another potential problem is the speed of computer-aided jobs. For speed, Visual Basic uses the newer token-based technology, joining other interpreted languages like Java and Perl. Nevertheless, based on my critical tests, Windows and Java code run 10 times slower than C++ code.

## Room to Grow

The much system provides a lot of functionality via portable objects and methods, which form a friendly face over the pre-built capabilities. A good case in point is that they make DDE (Dynamic Data Exchange) very easy and simple, with a little bit of study and experimentation, can completely set up a DDE link with another one of his Windows applications, e.g., Excel, that spreads DDE.

To really make the pre-built thing and device, though, be prepared to use your steps as a Windows interface. Like me, you may even resort to looking and

using undocumented features to make your applications work just the way you want. Anyway, no pun.

If you need to go beyond the pre-built to tap into the extensions of the underlying Windows API (Application Program Interface), you would be sure to find all that portion in a professional programmer's book. Even though you may have written some heavy kernel macros before, you should be aware that even experienced programmers find the underlying software challenging. Serial communications is one example that falls under this category.

## In the Cockpit

On a shorter note, working with Windows is fun. The adorable Code Window is quite neat and it found the automatic formatting and some things interesting. I particularly like the row with which I can get to the relevant part of my program, merely by double-clicking on an object.

Yes, I have a few gripes. The immediate window, where automatic Run is typed in, could use a lot more functionality. Same for the Code Window. I wish I could turn off the instant syntax checker since it interferes with my edits. There are faults with the project save procedure. I can't 1) create a directory, 2) back up my project, and 3) save my saved project as an efficient way.

## Power Trips, Anyone?

Although the manual (p. 1/198) says that a Windows API prototype file is included, it seems a little. To do serious programming, it is necessary to tap the Windows DLL (Dynamic Link Library). Although the SDK books are available in bookstores, they refer to symbolic constants which are only defined in the SDK's windows.h file. Microsoft can come a substantial step if they can roll QuickC into Visual Basic so that the power programmer can create custom DLLs (Dynamic Link Libraries) on the fly. These power packs can tremendously enhance your effectiveness, particularly since accessing DLLs from Visual is dead end.

In conclusion, though Visual Basic is a remarkable, on-site controls and DLLs it provides an environment for working with abstract as opposed to concrete (visual) objects. This will simplify the development of an abstract for the customer. And then, better and better, you can do all things like collection classes, databases, and streams. Another obstacle to third-party extensions is that they will have to try to extend the stock Help with their own documentation.

Thanks for all the reading and looking. I hope you find this article helpful. I will be happy to hear from you. (800) 424-0028

## POS Systems: a Case History

by Gwynne Rowland

**B**ack in 1989, Strider Computer Centre installed a point-of-sale (POS) system into two stores. The Computer Paper speaks with Strider President David McDonald on how the system has worked out.

**TCP:** Why did you initially consider going to a point-of-sale system?

**GM:** Basically, because inventory control was one of the major difficulties we had. We wanted a system to track stock and facilitate timely reordering. We also wanted to set up a customer base and effectively track our revenues.

**TCP:** How many terminals are you currently running on the POS system?

**GM:** We have seven or eight. They're mostly KTs, but ATs would have better performance. It is running on Novell, which has been very reliable.

**TCP:** How much time does it take to maintain the POS system?

**GM:** The actual POS system takes about an hour. What does take time is cleaning up old inventory status, duplicate customer files, converting data entry errors and so forth. We have to go in and clean out the old files and convert or reconvert data into a new one.

**TCP:** What were the most troublesome problems in getting the system up and running?

**GM:** Aside from the actual retraining—learning a starting point



where you're actually doing the system retrain. We found it easier to just enter the codes and then do a manual inventory count.

Now, when we create inventory, we don't even do the store data, we just do one section of the store at a time.

Integrating it with our AirPAC accounting system was, uh, challenging. There is a few months that done it automatically, but we don't use it yet.

Rifas was not the first POS system we tried. We had a different one a year earlier but we scrapped it. The person from the company we got it from didn't set it up correctly, and in our case, and probably that of most other retailers, we didn't have the time or expertise to reconfigure and maintain it by ourselves. When people like us get up and configure the system in an external computer, a POS package. Rifas has been updated three times, and we've been pretty happy with it.

**TCP:** In retrospect, how has the POS system helped your business?

**GM:** Absolutely, without question. It was a lot of work, but otherwise we wouldn't be able to do the kind of order and inventory tracking we do. It does all my order entry. Any kind of retailer should consider the value of that.

Contact: David McDonald, Strider Computer Centre 504-5022



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### POINT-OF-SALE

## A POS Resource Guide

by The Computer Paper Staff

**W**ho knows everything this article as we do many others by calling around to find out what's popular, what people think about the products. However, it was because of this that we were able to get the most dealers to speak to, the more products we mentioned. Undoubtedly, there is almost no product that has "cracked the market" and become a major player in the industry available. (Changes, rather than focus on one or two products, we present a guide to what's available. Each entry consists of contact information, pricing, system requirements and a summary of key features.

### Albacore II

Software developer: Comsoft Inc. 205, 8000 S. 170 St. Edgewood, AK 99518 (409) 495-0094, (409) 495-0235

Local distributors: Interlink Computers, 5520 - 139 St. Delta, B.C. 985-4777, TLD Computers Unit 100, 4845 Pa-2 Rd. Richmond, B.C. 878-0700

Retail prices: \$2,495 (incl. Albacore II inventory)

Optional costs: Cash drawer, scanner, slip printer, if any. System requirements: 500Kb, 640Kb, 1MB. Screen resolution available/cost: \$250 (optional) towards purchase. Key features: like a fully configurable system set up, integrates with the ALI inventory modules, allows single/multiple users per work station, accommodates most sales, cash drawers, fully supports GST set up in customer records file, calculates change due on cash sales, records a check validation no., stores the credit card no. in expiry date on file.

### Bar code scanning equipment

Software developer: Real Data Systems 100 - 105th Street Georgia St., Vancouver, B.C. V6G 2V3 683-7225. Key features: Works with any software package. On-site support and card readers, bar code label printers & handheld computers for stock counting.

### A.M.S. Advanced Management Software

Software developer: Amco Technologies Inc. 3180 West Broadway, Vancouver, B.C. V6K 1H1 684-1000. Local distributors: Acme Computers, 1000 - 100th St. Delta, B.C. 985-4777.

Retail prices: \$2,000. System requirements: DOS 3.0 or higher. Screen resolution available/cost: \$50. Key features: Point and select, inventory control, AR, A/P, G/L, commissions, purchase orders. Software made easy.

### DC 4 Plus / DC 4 Link

Software developer: Super Software Inc., 4700 Drew Road, Mississauga, ON L4W 5H1

Local distributors: none in store. Retail prices: \$2,500.

System requirements: 50K, 640K. Screen resolution available/cost: none.

Key features: Pulls data from register to hand office, sends price changes and E-mail to store, produces daily report of hand office, interfaces to receipt inventory & stock modules, as well as other self goods packages, interfaces to ACORN, & Branch & Region.

### Easy Retail

Software developer: Hands On Computers, 1422 - 12th Street, White Rock, B.C. V9A 3Z4 354-1719

Local distributors: Lingo Computers, Amazing Innovations Computer, Inc. Retail prices: \$275.

System requirements: PC - AT, printer, hard disk. Screen resolution available/cost: none. Key features: Full system without accounting features.

### Easy Retail Version 3.0

Software developer: Super Software, 100 - 105th Street, White Rock, B.C. V9A 3Z4 354-1719 353-5500.

Local distributors: in store and Super Software.

Retail prices: \$250.

System requirements: HD 100 or higher.

Screen resolution available/cost: \$15 plus taxes for shipping & handling. Key features: Cash, prints out daily cash summary & compares it to actual deposit, prints daily report of sales sorted by receipt no., payment method, inventory list of all on-hand products, actual sales/stocking/inventory and order report, shows inventory history lists & payments, individual employee sales for any period, summary of all sales/commissions hours worked/profit margins list can print, small receipt option, full GST reports.

### Gambler Manager

Software developer: Winward Software, 275 Cummings Ave. E., Port Huron, B.C. 495-0234 FAX 495-0234.

Local distributors: none in store. System requirements: IBM compatible. Key features: For daily stock, bookend & full calculations on a gas station/commercial store. Takes track up receipts & automatically calculates fuel volume in tanks, keeps track of customer change slips, stock statement on receipt and, full GST calculations. Includes reports on deposits, A/P & A/T to the GST authorities, keeps track of daily levels in various departments in cigarettes, lottery, oil, pop & juice food.

### Multi Express - sales

Software developer: RTI Technologies Inc. 105-5650 W. Broadway, Vancouver, B.C. V6K 3K4 753-0000.

Local distributors: none in store. Retail prices: \$1,999 with 6 mos. free upgrade warranty, dealer may sell for less.

**Optical media: Multisource: Novell version****\$259**

**System requirements:** 60286 computer or up, 1MB memory and hard drive. Demo version available/price \$90 with full version's, full functional with no restrictions.

**Key features:** Real time & fully integrated with POS, ordering, inventory, rental, version & back orders, inventory control, A/R, A/P sales history analysis, purchasing & quick inventory control system. Add new customers, new items or new vendors at increasing or purchasing, select different items from a printer at receiving or purchasing, change vendor instead of issuing credit note & comes with multi-trail, all levels password security defined by users.

**PC - Sell**

**Software developer:** Alliance Business Computers, 341-G North Road, Copeland, B.C. V8L 5V8. 594-8888. 594-6884. 1-800-3608-4133

**Local distributors want to share:**

**Base price:** \$295 to \$1,255

**Optional extra:** A/C, full code manual (rental) or hardcopy \$400. \$1,500, scales to be added soon.

**System requirements:** 640K RAM, HD, DOS 3.3 or above.

**Demo version available/price:** \$10 shipping prepaid incl. record incl.

**Key features:** Customer, inventory with 5 pricing levels, vendors, sales, standing orders, rentals, reservations, shipping routes, P/Os, delivery loads, shipping forms, customer & sales histories, secure inventory, bar code labels, credits & returns, returns/labels user definable screens, reportable income, real time entry. Available on loan/lease with all equipment.

**POS IM**

**Software developer:** Ensign systems Inc. 28 North Main, Lepton, Utah 84601.

**Local distributors:** Selling Solutions, 3934 McGill, Vancouver, B.C. V6K 1H9. 515-5549 voice or fax.

**Base price:** \$1200

**System requirements:** Any Macintosh, (hard disk).

**Demo version available/price:** Free to qualified buyers.

**Key features:** Mac friendly, single/multiple user 144 million upgrade sales, unlimited items & vendor tracking, powerful report sales allows retailer to design own reports, barcodes etc. and verify used by Apple as their company stores, almost an outside support required, reserved as above, either POS by MacUser, Mac World, others featuring out to customers, usually no need to change existing accounting package.

**Profitek—RS Retail Sales Systems**

**Software developer:** Infopac Systems Inc. 101 - 2804 Kingsway, Vancouver, B.C. 604-3293

**Local distributors want to share:**

**Base price:** \$1,550, network version \$1,575

**Optional extra:** year



**System requirements:** IBM compatible 286, 386 or 486 based PC, 640K RAM, HD, 1HD, mouse or VGA monitor.

**Demo version available/price:** \$90

**Key features:** Clients of '3D Matrix' or 'Barling & Compuser' versions which track software & non-identifiable item inventory. Includes complete cash register functions, inventory control, customer maintenance, mailing lists. All order entry & sales analysis, handles sales, refunds, deposits, layaways & payments to customer's credit. Quick releases & sales management with full reports, option of instant inventory pending in system store & forecasts with gross margin lines, split tender for transactions available.

**Rapid Retail, Video and Horn Rental Software**

**Software developer:** T.V.I. Inc. 891 - 2620 Westview Dr. or 7th Floor, Vancouver, B.C. V6M 4M8. 603-9978. Fax 603-2294

**Local distributors want:**

**Base price:** Single \$95, Multi \$1,585

**System requirements:** 286, 640K, 4MB, DOS 3.3, 1600 printer

**Demo version available/price:** Free. Real time and/or graphics database demo.

**Key features:** Easy to use, rental/returns, POS inventory, prints bar codes, reservations very fast, user defined fields, reports well designed, multi use of records, modern communications over 600 printers, window designed screens with constant help, public terminal software.

**Retail Systems /2**

**Software developer:** Choice Software Systems Inc. 1475, 353 - 11 Ave S.W., Calgary, AB. T2R 1L9. (403) 264-8448. Fax (403) 264-5216

**Local distributors:**

**Base price:** \$750 (monthly rental also available)

**Optional extra:** Disk, or Unix operating system

**System requirements:** 286, 640K HD

**Demo version available/price:** No cost

**Key features:** Multi user/locking, multi user, Unix version, optional serial, real time update, XCR 7825 ECR & Micro terminal POS, screening, IBM based build interface, on-line support, frequent buyer demographics

**Sales Easy**

**Software developer:** B.A.S. Business Automation Systems Inc., 345 - 4710 Kingsway, Burnaby, B.C. V5H 4M5. 451-8861

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**Optional extra:** No code readers, cash drawer, photo disk or only versions.

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#### Samco Point of Sale

Software developer: Samco Software Inc. Unit 61 - 7766 - Clark Street, Surrey, B.C. V4W 1G1 (604) 594-2000.

Price: \$195

Optional extra: \$195 - Samco Canadian Real World Inventory control, plus 4/5.

System requirements: DOS 3.3 or higher, 100K RAM.

Key features: Reverse add & returns, registers correct gross sales, tax, discounts, etc., merchandise pricing by key entry or bar codes, identification merchandise by number, dept or description, automatically adds sales tax, prints sales & payment receipts, invoice, receipts or void sales tickets, receipt combined process of cash,

checks, credit cards, coupons, etc., automatically balances cash drawer, displays current inventory levels in multiple locations.

#### Samco Point of Sale II with Practical Accounting

Software developer: Samco Software Inc. Unit 61 - 7766 - Clark Street, Surrey, B.C. V4W 1G1 (604) 594-2000.

Price: \$195

Optional extra: \$195 - Real World Practical Accounting System \$95.

System requirements: DOS 3.3 or higher, 100K RAM.

Key features: Add-on to Samco Point of Sale, designed to replace a standard cash register, includes standard register functions such as sales, returns, spontaneous payments & spread order products, provides standard audit reports, wide range of reports, general ledger, payroll, etc., interface to cash drawer, bar code reader, receipt & invoice printers, etc., maintains inventory (Major info all of the time), reporting includes historical analysis, projected inventory overstock levels in stock out situations, GST handling on basis of sale.

#### Timeac Retail, Timeac food & beverage

Software developer: Timeac Computer Systems Inc. 227 1st St. New York, N.Y. 10011.

Local distributor: Timeac Total Hardware, Tel: 711-4444.

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Software developer: **Hold Point Software Ltd.**, 731 - 440 W. Cordova St. Vancouver, B.C. V6B 2V3, 467-2008 FAX 683-8911

Local distribution: **B Marketing, Ingram Micro, Microsoft** distribute nationally

**Buy price:** TMAN \$495, TMAN PLUS \$595

**Optional extra:** Cash drawer (if req.) \$250, receipt printer (if req.) \$220

**System requirements:** 68000 640K RAM. Demo version available / rent \$15 + taxes & shipping/handling fee

**Key features:** Direct integration of G/L, A/P, A/R to ACCPAC, Bedford, also operate as either POS or service mode.

Bedford integration supports ACCPAC Bedford Client all data, customers & vendors, auto update of all general

ledgers created by TMAN directly to Bedford data files & of Bedford A/R & A/P modules, displays customer's A/R

status directly from Bedford as POS Gds. GST capable, item sales history by customer by amount, customer purchase history by invoice. Inventory reports, account and sales report by item, identify dollar value by sp., sales movement by unit volume by sp.

## **The Marathon Retailer**

Local distributor: **Marathon Systems Solutions Inc.**, 509 - 1250 W. Fender St. Vancouver B.C. V6B 2B9

**Buy price:** \$2,000

**Optional extra:** Accounting module \$500

**System requirements:** DOS 3.0 or higher, Novell, Unix

Demo version available / rent as

**Key features:** Brand, style, color, size, width reporting for shoes, fashion & sporting goods retailers. Very flexible, easy-to-use POS operation, credit card integration, optional bar coding, handles gift cards, coupons, loyalty & an account, has integrated customer database, multiple store/warehouse capability, full-function inventory control, P/Os, A/P, A/R, G/L are all

completely fully integrated with the POS system

**TeleSystems (TI) 9040**

Software developer: **International TeleSystems Inc.**, 151, 9128 - 151st St. Surrey, B.C. V3R 4E7 580-2085 FAX 580-8371

**System requirements:** IBM PC with 40 MB HD, 440K, 286 PC with 100MB HD, 540K RAM

**Key features:** For product-oriented retail store many access to products with order confirmation is calculated & for non-product-oriented can be provided mainly for people to find info 24 hrs. daily, pay bills, get help, receive subscription & get answers to common questions.

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## Conclusion

AppleTalk drives for proper operation. Although the current version does not work with Apple's new System 7 software, Netatalk sold as this a System 7-compatible upgrade will be released by the time you read this.

Other software features include a comprehensive RAM disk, collecting RAM (standard Apple memory management) calls to the 68000, and copying the Mac Plus ROM to 32-bit RAM for faster performance of ROM-based operating system calls. Despite the fact that the Netatalk equips the Mac Plus with a 64000 with built-in PMMU (paged memory management) chip, it remains unable to take advantage of System 7's "virtual memory" feature, due to the fact that Apple's implementation requires TruVision features not present in the Plus' 128K ROMs. Fortunately, a third-party VM product called Virtual from Compucon (416-334-0717) supports TruVision on 128K ROMs, as long as a 68000 is present.

A Compucon tech support rep said that Virtual has been adapted for virtually every workstation product on the market, with implementations for Neop (who's name is on the Netatalk software), Modas, Don's Macintosh workstations and others, including original Mac II's upgraded with a 68000 PMMU chip. Although at the writing, Virtual is not System 7-compatible, he said versions of Virtual for upgraded Mac Plus and SE computers running System 7 should also be ready by the time you read this, with implementations for other 68000-based machines slated to appear by October.

## Conclusion

If you had resigned yourself to getting that old Mac out to pasture on any of this past a model, consider these workstations as a cost-effective alternative. If you don't need the color, audio input capabilities and other bells and whistles of today's workstations, Macs can give your current machine a whole new lease on life.

*Continued from page 12*

Upgrade the components of that workstation, the showcase flag over the door of the CD disc is probably a good idea (minimizing theft on many CD-ROM drives full rooms no data-related problems), although we'd rather not a multi-task, slow-loading share system (like those found on better cassette decks and, usually, virtually all audio CD players) rather than the slower spreadsheet effect on the data.

On the back of the drive are two SCSI ports. Unlike every other SCSI

drive we've ever seen, the (Hitachi's ports are misleadingly labelled IS and CS-1), as if they are not interchangeable (they are). To its credit, though, the manual correctly identifies the two ports as identical. It also includes a good description of how to set the SCSI ID and internal termination switches.

## Conclusion

Remember that speed isn't everything. Despite the fact that this drive is usually the fastest drive we've ever tested, its expensive construction and

the fact that data from some share doesn't load properly significantly slow our perception of it as a product. It is hardly acceptable to recommend a drive that apparently can't load certain types of data. In this case, slow and steady wins the race.



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# Charles Moore

By Emily Green

## Interviewing Galfen

**H**ow, you may wonder, did it *really* take him so long to go back on home and restore the great computers like Colides or Locomote de Vint?

**N**ext month, I will get a chance to interview Charles Moore, one age's experienced computer scientist. You can get to him last time, because he will be coming to

speak at BCIT on September 19. Moore created Forth, a radically innovative computer language. He also designed R101 R102 computers that run at 300 to 500 MHz. His computers are faster than a very fast MHz.

## How I found out About Moore

You probably have never even heard

of Moore. I haven't either until 1979. I was working with Dr. John Lilly at the Wilson at Dolphin Foundation in California. We were working on Project Jans to make ultrasonic sounds understood in dolphins and analyze their responses using a mathematical technique called Fast Fourier Transform.

I arrived with prepared to write computer code in DEC PDP-11 assembler, but Lilly explained he wanted me to use a new language called Forth. The language was totally weird. It had no redundancy in any of

the computer languages I knew already. Charles Moore was its creator.

I knew only a few words of this strange new language and overnight I created an electronic R101-R102 that let dolphins draw, using ultrasonic whistles to control the pen.

I could not believe how quickly I could produce results with Forth. I then went back to Vancouver and set about writing my own Forth-based desktop language called Advantage. I use it for writing custom charting applications.

## What Is Forth?

Some people call Forth a religion, because its adherents are so fanatically positive about the language. I think of it as a toolkit to build your own computer language custom-tailored for the job.

In the companies you will hear about C, Pascal, Ada and Modula, but you will rarely hear about Forth.

However, you have probably used programs written in Forth without even knowing it. Forth is behind many RapidFile, VF Planner and Fincher accounting programs.

Forth shines in interacting with the real world. For example, Bell Canada uses it to handle network trouble-shooting. Forth controlled the models for the battle scenes in Star Wars. It runs the Mexican used car football games. It even guides and compiles.

## The Chops

When it came time to implement Forth in existing computers, Moore was shocked at how much challenging they do. They might take perhaps six instructions to accomplish what you would think of as a single Forth operation such as adding two numbers.

So he decided to outpace computers as they would get on with it, and do elementary Forth operations in a single step.

He went even further, and designed his code so that sometimes get computers in the time or less operations in a single step.

To compare comprehensible computer programs, you must break them into tiny pieces. A traditional computer wastes huge amounts of time in the CALL mechanism, i.e., shifting attention from one piece of the program to another. Moore found one way to slash this overhead.

Moore takes a deep approach to problem-solving. He is not content just to make a minor improvement to what has already been done. He is willing to start over completely from scratch looking for the simplest, clearest solution.

## Where and When

Come see him, if only to be able to tell your grand children. In fact, I think they may even have the future of our age. He will be at the Forth BC Users' Group meeting at BCIT rooms BA-504 on September 19 at 7:00 PM and at the BCU Programming Session on September 27. For details call 526-9844 or 526-9991.

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**Lotus Updates 1-2-3**

**CAMBRIDGE, MASSACHUSETTS, JUL 26 (UPI)**—Lotus Development has updated its top DOS spreadsheet product. The new 1-2-3 for DOS Release 3.1 is available immediately. Lotus also reported a large drop in net income in the second quarter.

1-2-3 for DOS Release 3.1 brings most of the same features as Release 2.1 that Release 2.2 added in three of Release 2.1. Release 3.1 includes a file-sharing feature based on the technology used in Lotus' Magazine disk management software, as well as added spreadsheet modeling capabilities, both of which were introduced in Release 2.1, spreadsheet Devulz Allen and Neveline.

The new release also includes Lotus' latest technology, previously available only in 1-2-3/XT for OS/2, and the Lotus DataLink driver for data exchange with Excel, International's Paradox database software.

1-2-3 for DOS Release 3.1 requires an IBM or compatible PC with an 80386 or higher microprocessor, a hard disk, one megabyte of available system memory and DOS 3.0 or higher. For the whole story on the software, visit [www.lotus.com](http://www.lotus.com) (WHS-1-WYU) desktop, 1.5 megabyte of memory is recommended. Release requires three megabytes of memory.

The suggested retail price of the 1-2-3 for DOS Release 3.1 is Standard Release is US\$99. The Network Server and Node Release of the product will be available within 30 days at suggested retail prices of US\$99 and US\$99, respectively. Dutch, French, German, Italian, Spanish and Swedish versions of Release 3.1 will also be available this quarter.

Anyone who bought or upgraded to any PC version of 1-2-3 since March 1, 1984 can upgrade to Release 3.1 for a suggested retail price of US\$49. Also, anyone who bought or upgraded to Release 2.1 since January 4 is eligible for the same offer. All other 1-2-3 users can upgrade with the US\$150 Contact Executive Upgrade Lotus, 417-665-1300. David Allen, Lotus, 217-630-0000.

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**TORONTO, ONTARIO, JUL 22 (UPI)**—IBM's latest release of its Windows Pro Personal software for Microsoft Windows. Delta Technologies is taking advantage of Windows Dynamic Data Exchange (DDE) capabilities to make Windows and other software work together.

The first example is integration of Windows Pro and Polaris Software's Personal information manager. Windows Pro 2.0 has a built-in ability to spot the presence of Polaris and work with its phone book feature, company spokesman Joel Timmons explained. For example, when a Windows user



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6 *Alpha Realized 9:00-10:00PM	10 System 7.0 9:00-10:00	11 Intro to Word 9:00-10:00 Intro to Mail 6:30-8:00PM	8 Intro to Excel 9:30-10:00PM	12 *Intro to dBase 9:00-10:00
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return a person's last name, Packard will look up the person's last name and insert it automatically in the Windows mail screen.

Then usability required creation of special macros to both packages. Macintosh and DOS users a number of other possibilities for package to work together.

Mark Giese, product manager for Windows Pro, told Newsbytes Desktop is exploring a number of possible ways of taking advantage of DOS. For instance, he said, a database of names and addresses in Microsoft's Excel spreadsheet software could be merged with a letter created in Word for Windows and then sent out by fax using Windows Gateway Mail Software, before being sent to the fax machine. **Circle 10**

## 31 Unions Seek Anti-Repetitive Strain Injury Standards

WASHINGTON, DC, JUL 31 (AP)—The Washington Post has reported that a coalition of 31 unions has asked the U.S. Department of Labor's OSHA or Occupational Safety and Health Administration to issue an emergency six-month standard intended to combat repetitive strain injuries (RSI) such as those leading to cases of Carpal Tunnel Syndrome, something often experienced by those who spend many hours each day keying data into computers.

According to the Post report, the number of cumulative trauma disorder cases (another name for the problem)

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has experienced a fivefold increase during the period from 1981 to 1989. As a result, around one in 500 U.S. workers now suffers from the injury, which affects both blue-collar factory workers and white-collar clerical workers.

The injury, which can result in permanent disability, occurs when a lighter repetitive task involving twisted wrist motion causes a strengthening of the muscle at the base of the wrist. The situation is made worse by vibration at the site of the injury.

These two strains together cause a thickening and pinching of the bundle of nerves which pass through the "tunnel" formed by the structure, pinching the nerves, so resulting in pain and weakness of the hand and wrist.

Some workers have had surgery to open up the constricting sheath, which may provide a degree of permanent relief from the pain.

Unions, from the AFL-CIO to the United Food & Commercial Workers International, are now requesting the emergency regulations which would specify just how employers must adjust working conditions to eliminate or reduce the stress that is thought to cause the problems.

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Silicon's New Iris Indigo RISC Machine  
SAN JOSE, CALIFORNIA, JUL 22 (UPI)—Silicon Graphics has unveiled its latest weapon in the exploring work-

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son market—a hybrid machine complete with three-dimensional capabilities, called the IHS Indigo.

The Indigo includes a color monitor, high-quality CD-audio and video features with microprocessors included and a base price of \$7,995 for a megabyte of RAM.

The distinction between the high-end personal computer and low-end workstation markets is blurring more blurred every week. The next large market there is seen to be the color market of low-priced graphics-oriented machines.

Edward R. McCrackin, president and chief executive officer of Silicon Graphics, said, "The PC and workstation worlds are converging. Out of this fusion, a new type of product will emerge—the RISC personal computer."

Reduced instruction-set computer (RISC) microprocessors reduce the number of instructions performed by the processor, which speeds up operation of the desktop computer. A MIPS RISC processor powers the Indigo.

The release will be a shot in the arm for the AEC (Advanced Computing

Equipment) consortium, which consists of major software and hardware vendors all joining to make a claim on developing RISC technology. Silicon Graphics is one of the members. Other members include Compaq Computer Corporation and Digital Equipment Corp. AEC was formed to compete head-on with workstation leader Sun Microsystems, and the member two company, Hewlett-Packard, for future market share.

Apple recently threw in hat into the workstation ring with IBM by signing a letter of intent to develop future RISC

technology based on IBM's RS/6000 technology.

One of the biggest advantages of the new product, apart from its comparatively low price, is that it not only supports current software designed for the Silicon Graphics' platform, but will also be compatible with future operating system software being developed by AEC. Should that consortium succeed in its mission of producing future products.

Adobe Systems has already shown support for the new product by announcing that a version of Adobe Illustrator will be available on the IHS Indigo personal computers sometime in 1992. Autodesk will be releasing a version of AutoCAD for the Indigo. Other products announced and under development for the workstation are from top companies Wordperfect, Supplex, MacCAD, True Arc, Interleaf, and Intention.

Silicon Graphics first licensed Adobe's Display PostScript system in October of 1990 and the IHS Indigo is the first Silicon Graphics product to support the technology.

Adobe claims that with Display PostScript system, IHS Indigo users will have access to a true WYSIWYG (what you see is what you get) computing environment, since the images created on workstation display will precisely match the output from PostScript printers.

High-end workstations will be in search of \$80,000 Indigo grade solutions managers. Sony Worklight, says the Indigo will be capable of performing the same special effects that high-end Silicon Graphics workstations performed for the Terminator II—only at a lower price. The Industrial Light and Magic production company created scenes in which a character was retaken/placed, for which the first time was critical scenes, on the Silicon Graphics' \$20,000 graphics workstation.

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### NeXT Computers Posts Huge Sales Increase For Q3

**REDWOOD CITY, CALIFORNIA, AUG. 2 (NR)**—NeXT Computers has surpassed many in the computer industry by announcing that revenues for the second quarter ended June 30, 1991, reached \$46 million, or 68 percent increase over the prior quarter.

Shawn Thomas, spokesperson for the company, told Newsbyte that the results showed that NeXT was a "growing company whose technology is now being widely accepted."

According to the company, 76 percent of its workstation products went to customers as business and government, while the remaining 24 percent went to colleges and universities. Additionally, Europe and Asia accounted for more than 46 percent of sales.

The company and also revenues for the quarter came from sales of NeXTstations and NeXTcube, which began shipping in November, 1990. Additionally, the second quarter was the first full quarter of shipments of the

NeXTStation Color, which began shipping on March 11. The quarter also included several shipments of NeXTShareware, the company's new 1440 color PostScript workstation, which began shipping May 28. All four machines are powered by Motorola's 68040 microprocessor (Cyrus 4860). *Thomas* (Seattle, WA) 206-451-7060.

# Frame, Sun

**Approach Small Publishers.**  
LOS ANGELES, CALIFORNIA, AUG 14 (ENR)—Small publishers are moving to shift from Frame and Sun Microsystems for a Unimacro Sun SPARC station desktop publishing system that costs the most or less than a comparable IBM personal computer (PC) or Macintosh computer system.

The companies claim that several publications are switching from their current equipment and moving to the Sun/Frame combination for everything from business newsletters to magazines. Frame points to New Science, a Wall Street firm who purchased a desktop publishing product from Frame and a new using it for all of the company's materials, as an example.

Programmer Ray Barwick of New Science estimates that his machine now takes less than one-third the time to produce a single news-week as opposed to three months.

Frame said that its customer profile is starting to include administrative assistants, executives and word processing operators, because the Sun system

ing environment has pull-down menus and a sidebar, so even unskilled users get up to speed quickly.

Sun claims that sales of Unimacro workstations and servers for electronic publishing are 15.4 percent of the present total market representing \$182 million in revenue. The company estimates that the Sun workstations accounts for nearly half of all the workstations used for electronic publishing.

Sun also lists the many existing software vendors and commercial publishing vendors who support the Sun SPARC station. Lotus Development, WordPerfect, Xerox, Kodak, Johnson-Tate, Frame, Apple/Compagraphics, Dugout, ProPress Technologies, LaserJet and Raster Op are just a few of the vendors Sun mentions.

Sun is claiming that standard PCs and Apple Macintoshes are underpowered for storing large color images, and points out that Sun workstations can be interconnected to the PC or Mac.

Sun is offering a free video tape—"Meeting Today's Business Publishing Challenges"—that explains the benefits of the technology to potential customers. The tape is being issued free of charge until August 31, 1991.

Information is free to obtain the tape is available by writing to one of the following: Manager, Sun Microsystems, Inc., PO Box 5504, Denver, Colorado 80218-0504, or by calling (800) 890-4800. Contact Video Tape, Sun, Tel: 415/246-0299, Fax: 415/246-0818, 6800 Van Ness, San Francisco, CA 94133-1211.

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Cyrix 383-33MHz/25MHz PinMark Co-Processor	\$279.00

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## Educational Software

### The Heart of Educational Change

by Stuart E. Feldman, Superintendent of Schools, School District No. 13 (Poudre river)

As we enter the Information Age in an accelerated pace, it is imperative that educators and parents ensure that the software being introduced and used in the home and at school is beneficial to learning.

Technological changes in the past six months at the hardware and system levels are providing software developers with an opportunity to develop creative packages. We must never lose sight that the technology is a tool to improve the way we live, learn and work. We must also realize that we are part of a global village and we must be able to communicate to a variety of audiences.

Technology will become commonplace in our homes in the near future. Educational software will allow people to learn at both younger and older ages in ways we have not even thought about. The advent of main, data and video will also change the type and ways in we software. Besides the telephone, as the near future we will learn and communicate using satellites, the FM band, lasers, infrared and other electronic tools. The educational software will be a central link to this technological explosion.

Teachers will only benefit from technological advances if they can see that there is an improvement in the teaching/learning environment. Parents will want to have their children learn with technological assistance if it goes beyond the present "pen and paper" methods.

During the past five years a number of research studies have sought to answer the question "what will have the most expert children to learn from computer instruction?" In analyzing the reports there appears to be a consensus emerging that the computer as a peripheral have a positive effect on teaching and learning.

This conclusion is only positive if the educational software has been appropriately designed. Many software packages are designed on an opposing philosophical base to the instruction in the learning environment. If you believe in a creative-thinking style of learning,

"Educational software will allow people to learn at both younger and older ages in ways we have not even thought about."



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A search for high tech jobs reveals a need for deeper skills



By R. G. McMan  
**C**ould I be a desktop publisher? Or about my own company to do business research? Or better yet, unlock my total creative potential with Supermarket? Could there be a future for me, the aspiring entrepreneur, in one of these areas?

Picking my pencil and notebook, I ventured forth into downtown Vancouver's information world in search of new career opportunities. What I found was neither sunny nor woeful — neither that I had expected. But there may just be gold at the end of the rainbow for persons determined to pursue it.

### In Search of Understanding

The information market supports three main businesses: the information business, the publishing business and the information understanding business.

Transmission businesses are usually large, global affairs such as AT&T and IBM. They manufacture hardware and provide network services. These prospects need to manufacture network enabling their staff. But unless you decide to compete against them, it is unlikely you will cross their line.

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The information understanding business on the other hand, is generally small, often local, and relatively newly entered. The understanding business gathers data, transforms it through organization and information relevant to a particular customer, then presents it in a suitable format. Making information understandable is a good supported career, and as our computer enterprises will work on this area. My search took me inside three of Vancouver's understanding businesses.

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### Breaking The Trail in Desktop Publishing

Owner Patricia Hart of Vancouver art production services, a Vancouver art production company, locally agreed to escort me into the world of desktop publishing (DTP). With 10 years' experience in art production and typesetting, Patricia is a shiftable guide who speaks with confidence and knowledge.

Involved in DTP since 1978, she uses DTP not so much as an end in itself but as "just another tool" to serve her clients—mostly art agencies and other designers. She describes the Vancouver market as "diverse and open-ended, and set to become more than that" as the technology finds specialty markets.

Patricia expects the industry to show considerable growth as organizations such as newspapers, press agencies, art production houses and printers join DTP with their in-house production systems. The advantage? Control over time and production—not cost, as many believe. Productivity usually drops until users master the learning curve.

If you're thinking of giving up your present career for a DTP position, make sure you have a comprehensive background in the graphics or advertising disciplines. "The need is for more experience than most quick courses provide," says Patricia. "Years and years of skill, and training are required to be a first-class DTP publisher." A good DTP publisher is competent in typography, screen angles, color work, production processes, images, computer design and layout, paste-up, film and plate making and printing. Patricia wouldn't even consider hiring someone with less than two years' experience in traditional graphic arts or typesetting. Other desirable traits are methodical work habits, an interest in working with computers, and creativity.

If you're good, so is the money: \$30 to \$50 per hour. If you're bad, you won't be in the industry long.

Patricia sees the DTP future as exciting and expects continuously creative work to become commonplace. Her advice for those wishing to become involved: get training and experience in the traditional art or advertising environment first, then become a DTP publisher.

Thoroughly inspired by Patricia, but disappointed over how many new skills I needed to enter DTP, I decided to shift my search elsewhere.

### Digital Hunters: Online Research

A short trek brought me to one of Vancouver's well-established data researchers: Tania Gorn of Just The Facts Research for Tania, a librarian by trade, has spent 19 years in the online research industry and was happy to share her hard-earned knowledge.

Just The Facts provides a combination of online and manual research. Also available are custom

database set-ups and a record-management service. Clients use an impressive and handsome set of sites who have budgeted for information research because they understand its value. They buy information as a number of packages, including such items as trend reports, forecasts, statistics, market news, sales figures and competitor information. Most prefer to use the expertise of consultants such as Tania because it saves them both time and money over having employees do searches which can require a high level of skill.

When I asked Tania about any future in online research, she was polite but realistic:

About 85% of information researchers, she explained, have a degree in library sciences—although she admitted that not all companies with specific knowledge or expertise in a subject area. The Vancouver market is still transitioning from its traditional information businesses (such as the Vancouver yellow pages) and not expected to develop much in the near future. Cities such as Toronto, with many corporate headquarters, offer a much broader market base. Moreover, however, she opens up remote markets—Tania serves clients in California, Australia and Japan.

Successful marketing is largely based on having contacts in the industry, making it a hard one to break into, and the industry itself is susceptible to economic. On the plus side, continued to start a small firm is relatively low—a computer, modem, telephone and plenty of sharpened pencils.

To make it in the B.C. market you must be "good," which means fast, efficient and knowledgeable. And while Tania Gorn has been very successful, she advises newcomers to get training, understand and target their market very carefully, and not to give up the day job at first. Even if you're good, she says, it can be hard to make a living. I decided to suffer on.

### What's all the Hype?

Perhaps the most exciting area for future growth is "hypermedia," a promotional technology brought about by increases in information storage and the need to refine access and delivery for end users.

Hypermedia (or multimedia—the term is interchangeable) refers to computer-based delivery of multiple mediums: sound, music, text, static graphics, animation and full motion video. Hypermedia represents a different way of accessing and presenting information which allows the user autonomy (control over a multi-media browsing process).

In hypermedia, information is grouped conceptually into "nodes" which rely on intelligently programmed interlinkage. Unlike a book, which reads from start to finish, hypermedia products can jump about from chapter to chapter, back and forth, and maintain intelligibility. The result is much faster navigation, especially through large volumes of information.

such as GEs and Interdisc, and a more entertaining, engaging and educational experience for the user.

Sometimes called "interest path learning," hypermedia shifts learning from dry, rote, left-brained repetition towards a more fluid, intuitive, right-brained approach. This will delight many (especially children), but may confuse others who are more "straight line" thinkers. Hypermedia also requires much greater levels of user participation and a plan for learning, but a switch for others who like a more power approach.

Despite my drawbacks, hypermedia appears poised for major growth. A September 1990 Market Intelligence Research Corporation study projects a multimedia market by 1997. And hypermedia experts predict even television and newspapers will ultimately be multimedia.

B.C. companies such as MotionWorks of Vancouver and Sanctuary Woods of Victoria are promoting hypermedia for training and education, advertising, information kiosks, professional presentations, computer games and other applications. Some B.C. educational institutions are already applying the technology in the school system—just now when it may represent an greatest potential. Other smaller companies are a handful of hospital audiobooks are specializing in audio markets.

But despite high-tech customers such as CP Rail, Vancouver Children's Hospital and the B.C. Government, the Vancouver market is still moving slowly due to hard financial times and the untamed nature of the product. Hypermedia will "shaky and clumsy" evolve in the B.C. market, "as corporations become aware of its value," according to Vancouver systems consultant David Lewis.

To be a good hypermedia producer requires an extensive background in a variety of fields. David Lewis looks for people who have at least some of the combined skills of animator, artist, movie producer, graphic designer, sound engineer and computer expert. And now should be well organized, calm, and able to deal well with high levels of stress. By now, most \$40-\$50 per hour is no average starting wage—if you're lucky enough to find steady

work. Most hypermedia productions are done on a contract basis by small companies which call in programming or artists help as required. And while prices are coming down, a studio of professional-quality equipment will likely cost you \$10,000 and up. Upon hearing that, I decided to set computer back to the classroom.

### Back to the Books (and software tutorials)

As a career search, come to an end, at business about that desktop publishing, online research and hypermedia production are tools, not trades. Despite wanting to be a well-rounded solid background training and a considerable experience as a related area before they are in demand because of short courses that promise to turn you into an industry expert in a few weeks or months. If interested in pursuing any of these or other information careers, talk to as many people as you can who are already working in the industry before committing yourself.

The future of these technologies is bright, so look upon this as a time to prepare yourself. Because if you don't have the credentials, it can be a concrete jungle out there. Really!

### Contact information:

EDP: Afterwords Publishing Services,  
8105-436 Seattle St., Vancouver BC V6H  
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## TRAINING

# Only the Educated Will Survive

by Ben Eddins

Now that Canadian businesses are cautiously embracing the good news of a falling recession, company executives are once again able to focus on other important aspects of their growing enterprises. Managers are rediscovering the disturbing reality that employee education still remains one of the most complex management issues of the 80's.

According to Statistics Canada, companies in this country spend only half the amount of what Americans, Japanese, and Swedish companies allocate for computer education. In fact, the decade of the '80s saw only 22 percent of all Canadian companies including training costs within their annual budgets, and only 14 percent of all Canadian employees regularly enrolled in computer courses sponsored by their employers.

But it seems that corporate Canada is finally starting to see the correlation between lack of training and poor office productivity. Management has just now realized that large increases in expenditures for automation technology have not guaranteed increased productivity. Instead,

computer training is being viewed as a strategic investment rather than a recurring cost.

How can a company, who has come to terms with the reality of computer education as a necessity, begin to provide training for their employees? Ideally, this question should be addressed even before a new system is implemented into the employee work environment. It is vital to first determine who the new users are, what existing levels of expertise these users already have, and what new levels of increased productivity will they be expected to reach with the introduction of the new computer technology to be installed.

Many consultants recommend that a company communicate the general nature of its training plans to its employees by making a positive strategic positioning statement which indicates the direction of the company. If this message is clearly communicated by the employees and readily accepted by the employees, there will be an increased desire to learn about the new technology.

It is important that the company's new training plan include guidelines

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approval, budgets, and methods of testing and re-training is new software upgrades may eventually require it. It is absolutely imperative that the company commit to ongoing education as an integral function of the company itself. A philosophical commitment can be demonstrated as a written strategy statement or as part of the company's formal business plan. A more concrete action would involve senior management assigning a top executive to take direct responsibility for the introduction and execution of all education programs.

For those who are committed to future survival and growth, it is vital to allocate an annual investment of approximately 10 percent of yearly hardware costs for the company education budget. It is important to realize that this new training and education endeavor is much more than a 12th man company plan. As hardware technology changes, and because many application software packages are updated almost every 9 months, it is essential to make the training concept a permanent commitment.

How does a company, after deciding to introduce an education program, select the best training method for its employees? Indeed, there are many to be choosing from, of options including reference manuals and third party textbooks, audio cassettes and video tapes, on-line help and computer-based training, as well as hands-on training in a traditional classroom setting.

While reference manuals and texts have always been the least popular method perhaps the most frustrating method of learning, audio/video resources are gaining popularity as inexpensive options for computer training. Ranging from \$40.00 to \$600.00, these simple tools are ideal for people who are nonverbal learners with computers and also technically capable of running self-instructed equipment. As most people are comfortable as friend of a television or movie, these training tools can often prove to be the least intimidating and the most ideal for "on-your-own" learning.

Perhaps one of the greatest advances in "self-instructed" software is the recent advent of online manuals and content oriented help screens. Combine these electronic manuals with training disks complete with sample exercises and you begin to depart from the world of computer-based training. Computer-based training requires no extra equipment and is available from a variety of vendors in the \$50.00 to \$200.00 range.

However, most experts agree that interactive training is the most effective method for learning. In addition to the availability of an instructor who can give immediate answers to questions as they arise, students usually work in a lab environment with 10 to 15 others who are also going through the same learning process. While this type of

training isn't exactly inexpensive - with ranges from \$100.00 to \$1000.00 per person per day - it is usually found to be the most rewarding for participating students.

Even after deciding that classroom education would be the most ideal method for your computer training, there are still several important decisions to make before selecting your particular training site. There are the key factors to consider are the staff, the training environment, and the content.

What are the qualifications of your prospective instructor?

An ideal course instructor will have an excellent working knowledge of the computer products to be studied and have experience in teaching adult employees. In the event that the training company also sells computer hardware and software, it is important that your instructor is someone other than a computer sales representative. Ideally, your teacher will have an Education Division with expertise personnel who handle training independently from the Commercial Sales Division.

Will the training environment be conducive to learning? Many companies now specialize in training for employees of third party companies and have created learning labs which are designed strictly for teaching. When speaking with a prospective training company, insist on visiting their premises if the training will be conducted in their labs. In many cases, although prices generally increase, companies can send students and to the customer's site if there are enough employees needing simultaneous training on the same product.

What equipment does the prospective training company utilize? This is especially important for content, such as networking management or computer maintenance, which are hardware oriented. It is best if their lab environment simulates your own on-site work environment and that the instructor is familiar with your equipment. And it doesn't hurt to have references from employees of other companies that have the same equipment you have and have successfully completed courses with the prospective learner as well.

While the growing commitment to employee education becomes a reality for all of corporate Canada, perhaps the most important thing small business can do is to follow suit. This commitment, of time and money, will indeed pay off with big dividends in the near future. As every company, both big and small, prepares to compete in a global economy, many are predicting that only the educated will continue to be the winners.

Don Rubin is a Vancouver-based computer consultant and freelance writer.



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PAGE 4

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Continued from page 34

they will sometimes have to fiddle the code to get the results they want—but every year the options get better.

To assure the various aircraft components occasionally go wrong, Boeing Development Laboratories use microcomputer technology for failure analysis, nondestructive examination and mechanical testing. Legal and insurance claims around the world call upon this Richmond, B.C. company's resources to explain everything from takeups and in-flight failures to structural components.

Perhaps the most impressive display of personal computer graphics at the show was put on by Montreal's Allied-Signal Aerospace Canada. Their **SIMULATRIX** aircraft simulation training system incorporates breathtaking 256-color animation to explain the workings of jet engines. Using a 2.5 MB graphics display board of their own design, AlliedSignal is on a VCR for video overlay with color animation and digitally stored video to create a truly multimedia, interactive training system.

The student controls the pace and depth of the lesson by pointing with a mouse at numerous menu. **SIMULATRIX** explains the innermost workings of jet turbine engines by showing combustion processes in real-time animations.

Vancover's BC Research Corporation uses microcomputers extensively to assist the design objectives of the aerospace clients. The Vancouver-finger monitoring from a wireless audio wire about the size of a credit card, was developed using 386 and 486 PCs, along with Silicon Graphics engineering workstations, for California-based Teconplex Corporation.

Keeping aviation and aerospace companies across North America informed of the latest developments is the Aviation Aerospace Information Network (AAVIN), operated by Alan K. Hinton of Langley, B.C. and running on the Chronicle-designed 386/32V computer communications package. PC users with modems can exchange electronic mail, research data files and spreadsheet archives, or post bulletin on the AAVIN gateway.

The above are just a few of the companies which keep Canada at the forefront of aviation research. Most are small and entrepreneurial, with expertise in niche areas. All use microcomputers to inventory materials in use of the most sophisticated and exciting industries. Though rarely acknowledged, such companies represent Canada's best hopes for the future in a global market.

The AlliedSignal show also illustrates the extent to which personal computers are encroaching into the specialized domain of the graphics workstation.

There can only be good news for small Canadian development companies whose primary assets are vision and talent—and for the worldwide aviation industry which reaps the rewards of their research.

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## NEW OFFICE IN KAMLOOPS

With a booming economy in the Okanagan region of British Columbia, ANO Office Automation is further expanding its network of offices with the opening of the Kamloops branch slated for mid-September, 1991.

The new office, located in the industrial district of Kamloops, will house a complete sales and service department with a full time Novell approved technician on-staff. Catering to the business, education, and government sectors, the primary thrust of this new office will be service.

"In today's dog-eat-dog world of the hi-tech industry, the successful reseller must stand apart from the rest. We do this through service excellence and not through price-price-price," explains Mr. Dick Modema, Regional Manager for the Okanagan and Kamloops.

We wish them all continued success in the beautiful and beautiful Okanagan and Shuswap regions!



### COME ON DOWN

ANO Office Automation will be participating in the Vancouver Business Computer Show September 18th and 19th at the Palladium Square Media Centre (Event #108), the Marketplace '91 exhibit September 19th and 20th for the members of the Province of British Columbia, and the UBC Computer Show October 5th and 6th.

We hope you get the opportunity to come down and visit our booth.

### New Bundle

## The Microsoft Office

The incredible success of Microsoft's Windows 3.0 operating environment has spawned a plethora of products supporting this new wave in personal computing. Even companies like Lotus, and WordPerfect who have traditionally stuck by their guns with text based applications are now folding to the demands for Windows versions.

Microsoft has gone one step further in securing its hold on the Windows applications market with the repackaging and attractive pricing of what it labels "The Microsoft Office". Essentially it is the bundling of Excel 3.0 the

leading graphical spreadsheet, Word for Windows, the number one selling full featured graphical word processor,

PowerPoint, the powerful presentation graphics program, and Microsoft Mail version 2.1, their latest entry in the network marketplace which is an excellent electronic mail solution supporting all major PC networks.

The major advantage is that all of the products offer a

consistent interface, reducing the learning curve dramatically. Of course the attractive list price of only \$899 Canadian makes it even more appealing.



## INSIDE THIS ISSUE

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*More Power*

## New 50MHz 486 Processor

Just when you thought it was safe to invest in a PC based on Intel's 33MHz 486DX, Intel turns around and announces the mass production of a new chip operating at 50MHz. Although actual systems aren't expected to ship until early Winter (probably to be profiled at the Fall Comdex in October at Las Vegas, NV), Intel has released the chip to PC manufacturer's for development.

This announcement comes fresh

on the heels of the co-release of the 386SL portable processor chip set by Intel and Zenith Data Systems at the Spring Comdex in Atlanta, GA. This revolutionary new processor set effectively makes notebooks running on the 20 and 16MHz 386DX obsolete after only a few months off the production lines. Already in mass production, Zenith's MasterPort 386SL boasts an extraordinary 8 to 11 hours of battery with a meager 1 to 1.5

hours of recharge time. Other features include stunning 32 grey scale VGA display, 16-bit display bus, 1.44MB 3.5" floppy drive, a special 60MB Comex hard drive, and 2MB of RAM, all weighing in under 7 pounds.

Also anticipated at Comdex will be Intel's much awaited 586 CPU. Although not official, it would only seem logical that Intel would have something newsworthy to show the power hungry public.

AND

*Tech Talk with Ken Ng*

## System Maintenance

**Q.** What preventative maintenance techniques should I use to improve the life of my PC?

**A.** PCs and their peripherals are delicate pieces of equipment. Aside from the preventative maintenance required (which I will get to later on), it is also vital that the operating environment be relatively dust free. One of the biggest problems (aside from dirty power) our service

department deals with is dust that accumulates inside the PC causing a component to short out.

In order to keep the system in good shape you should clean it up about once every 4 to 6 months. To do this you will need to invest in a floppy drive cleaning kit (one for each drive), a tape drive cleaning kit (if necessary), a bottle of compressed air, a hard drive utility package such as Spin Rate II or Optune, and a vacuum cleaner.

Once you have all of the supplies, you will have to open up your computer and take out all of the expansion cards. Using the compressed air clear out the power supply fan, ventilation slots in the case, floppy drives, tape drives, expansion slots, and expansion boards. Then strike up the vacuum cleaner and suck up all of the obvious dust and dirt. Next, using the drive cleaning kits, clean out the floppy and tape drives. After all this is done, piece your system together and run the hard drive clean up utility.

If you don't quite feel that adventurous, you can bring your system into our office and we'll do it all for you under our PC Tune Up program - volume discounts are available for multiple machines. This service by the way is included with the renewal of a Security Support On-site Service Program.

Other Tune Ups are available for laser and dot matrix printers - we'll discuss that one some other time.

AND

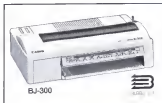


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## Bubble Jet Accels In CAD

The biggest assets for the average business user of the Canon BJ-300 and BJ-330 has been the outstanding paper handling, quiet operation, binding speed and superb output. For the engineering community, however, the speed and output are the real clenchers.

Through the use of Print-a-Plot (a third party software application), the latest additions to the Bubble Jet family effortlessly produce stunning CAD drawings without the expense of special paper. The biggest advantage being that every engineer can have a 300 or 330 by their desk to produce 360dpi quick



plots for final checking before sending it to an actual full-size plotter—they'll even print on vellum.

As we'll, instead of storing large D or E size plots, engineering firms are finding it handy to simply print out a plot on letter, legal, or ledger paper and file it like any other piece of paper.

Thus reducing wasted space, eliminating the cost of additional copies, and making for a more efficient filing system.

For more information on the Canon BJ-300 or BJ-330 call the ANO office nearest you or send in the "Reader Response Card" at the back of this month's ANOvision.

*Much Improved*

## Enhanced Training Program

ANO Office Automation and Computer Consultants International have made arrangements with Vancouver Community College and Douglas College to carry daytime courses at ANO's National Head Office in Richmond, B.C.

Commenting on this new program, Gillian Gellie, Co-ordinator for ANO's Professional Training Division further that this new arrangement "will enhance our capabilities to provide a full service training program. The demand for top notch computer training is growing rapidly. We anticipate this will reduce the burden on the evening and Saturday classes."

One of the biggest reasons cited for the popularity of computer training from sources like ANO is that the

software available keeps changing. Making it less than feasible to maintain an in-house training program. Since third party training programs can distribute the costs amongst a wider audience, the actual costs themselves are very attractive.

Aside from the packaged courses, ANO also offers customized courses for the business user with very specific training needs. Experts are available to help design a unique training program from a list of dozens of ap-

plications and operating environments, tailored to any company's requirements. Some of the most popular include WordPerfect, Windows, ACCPAC, Lotus, dBase, Ventura, Excel, Novell Network, and OS/2.

These customized courses can be held either one-on-one on-site, or in our classroom facilities. Should you have a unique application program which has been mastered by your own in-house expert, classroom rentals are available through Richmond, Kelowna, Edmonton, Ottawa, and Toronto.

For further information contact the ANO office nearest you or our Professional Training Division at (604) 276-6946.



## Helping Hand

# Customer Database Management

If you are not maintaining a strategically structured program for customer tracking, you could be losing out on lost revenue. Generally speaking, repeat patronage is a key to success. The way which you handle past customers can affect future revenues.

In this article we will be discussing the many facets of customer database management. Input has been supplied by industry leaders to ensure that all bases have been covered from a variety of angles.

## PROSPECT MANAGEMENT

Prospect Management is different from Customer Management in that it requires considerably more energy to prepare. With customers you probably already have the information required to setup a quality database. With prospects, however, you usually have to put in a little more time to acquire information about their business.

If you plan on using the database for direct mailing to prospects, you must make sure that the money you are putting into the mailer isn't ending up in the circular filing cabinet under "G". Your database should be targeted to the decision makers, and those who influence the decision makers.

## IDENTIFYING PURPOSE

The purpose of any customer database should be that of a marketing tool. One company which makes excellent use of its customer database

is Tip Top Tailors. Everyone that buys a product from Tip Top is asked if they are a member. If you are, you receive discounts and seasonal updates on upcoming specials. If you are not, they will add your name to their list simply by filling out a quick form.

You see Tip Top already knows that you buy suits or dress clothes, thus they invest the time to make sure that you come back to them when you need a new suit or tie. Of course they also understand that just because you're on their database doesn't mean you'll buy from them. Tip Top also spends an extraordinary amount of energy ensuring that you receive excellent service and an equally attractive price.

Tip Top can also use this database for sales analysis purposes. They should be able to track the number of club members who return to their stores, if customers are loyal to one particular location, customer buying frequency, and the average purchase of a club member. This type of information is crucial

when putting together a marketing strategy because they are better able to accurately target their campaigns.

Quality car dealerships use customer databases to track client purchases and remind the customer when it is time to come in for service. This is an excellent opportunity to both increase service revenue and to reinforce their market positioning in the

consumers mind. As the average buying cycle is between 5 and 7 years in the automotive industry, a small investment in their customer database can mean the thousands upon thousands of dollars in future revenue.

A properly maintained customer database can also reduce the learning curve when a new sales rep takes on an account. If the account is well documented, he or she won't be spending a lot of time sifting through paper or data files, and asking questions which should be easily accessible.

## IDENTIFYING NEEDS

The initial stage in creating a customer database is sifting through what you believe to be vital information about the customer. In order for a sporting goods distributor's database to be effective they must breakdown the types of stores they deal with. For them there are specialty stores (skiing, hockey, baseball, football etc.), general stores, and clothing only stores.

Also, they must know which accounts they already deal with, their average annual purchases, and who is responsible for that account. This type of information is essential when putting together a structured database. Without it, implementing a telemarketing or direct mail campaign would be next to impossible.

## DATABASE MANAGEMENT

One area where many get out of the gates quickly but fade out on the stretch is managing an existing database. Keeping a database up to date



requires time. If left unattended it willinevitably end up as a mess-mash of junk and quality contacts.

The best way to keep a database updated is through utilization. Through telemarketing and direct mail, a database can be kept relatively clean. One reader which works particularly well for this purpose is a questionnaire - be sure it includes a change of address and contact section. It also acts as a superb marketing tool for identifying customer wants and needs.

Never become lazy when maintaining your database. Each piece of information can be important, and may be needed sooner or later. You may want to make it the responsibility of each sales rep to maintain their account and prospect database.

Of equal importance is that you get the correct spelling of the customer and his or her name. Nothing is more irritating to a reader than spelling errors.

### AVOID CLUTTER

When setting up your database, be sure to include pertinent information, but don't clutter it up with trivial data. In general you will need to know the following information which we have outlined below.

#### Customer Type

This can include identification as a Frequent Buyer, Casual Buyer, or Prospect.

#### Industry

For those dealing with multiple industries this is vital. When targeting specific markets it is important to be able to quickly and easily separate them from the rest of the pack.

#### Product Interest

If you deal with a number of product lines it is important that you be able to target marketing campaigns towards those clients interested in particular products. Using the sporting goods distributor as an example, it would be redundant for them to

market a new line of ski equipment to holiday swimwear stores.

#### Sales Rep

Be sure to identify the sales personnel responsible for each account. Should a sales rep leave, it will be easier to distribute their accounts and prospects to other sales reps.

#### Important Dates

Record any important dates which relate to each customers i.e. birthdays, anniversary's, corporate year end, vacations etc.



#### Other

For AND-Office Automation our customer database is housed to track data about network installations and those customers that subscribe to annual on-site service. This type of information allows us to effectively manage our account base. As the sales, support, service, and telemarketing personnel have access to this data, we are better able to keep up to date records on our clients.

### USING YOUR DATABASE

Once you have an established customer/prospect database in place it's time to put it to use. As was mentioned earlier we use our database for many things - direct mail, telemarketing, service contract management, general customer information, and service information.

What you choose to use your database for will directly affect the software you select. Be sure to plan this out carefully and with longterm

goals in mind. The last thing you don't want to have to do is change software in mid-stride.

### DIRECT MAILING

Direct mail is probably the most common use for a customer database. A properly structured database will directly affect the effectiveness of this type of marketing activity. Obviously, an unorganized ill-planned customer database will result in a similar end product - as the saying goes "junk in, junk out".

Here are some general rules for successful direct mailing, assuming that your database is properly setup.

#### Rule #1: Get It The Right People

Don't waste your time sending direct mail pieces to those who won't read it. Try to avoid sending a mailer to a position such as general manager. Sending a mailer to an actual person has a higher probability of being read. Most secretaries are told to trash direct mailers that aren't for a particular person.

#### Rule #2: Attractive Packaging

The better looking the packaging your mailer is contained in the higher chance of it being opened and read.

#### Rule #3: Attractive Content

The never judge a book by its cover adage is no more important than with direct mail. The attractiveness of your direct mail pieces is just as important as the packaging.

#### Rule #4: Get To The Point

Most people in a decision making role want the meat of your message up front. Even in newsletters, you will lose the readers interest if you don't get to the point quickly.

### IMPROVED CUSTOMER TRACKING

Many companies choose to use their accounting software for this use, however, most systems (without the help of third party software) don't do

*Continued on Page 6*

*Long Assailed*

# Canofile 250 Conquering The Paper Jungle

Document filing is the single most important area needing improvement in today's office environment. Storing and retrieving information swiftly and effectively is an urgent priority to all office workers. Yet piles of information are often left neglected - accumulating on desktops, stuffed into drawers or at best filed in clumsy, awkward filing cabinets.

A survey conducted in Japan, asked companies to prioritize these conditions which would lead to a better office environment. A very high percentage of management, as well as office staff, felt it necessary to improve their filing systems. Canon responded to this need by introducing the Canofile 250 - the world's first desktop electronic filing unit.

Electronic filing systems using magnetic and optical media show a very prominent increase in demand. In fact, according to statistics compiled by the Association of Image and Information Management (AIIM), the information and image management industry is expected to grow 300% by the year 1993. By the year 1993, 54% of the entire product segment will be occupied by electronic filing systems. Clearly, in the future, electronic processing and automated retrieval of information will become standard in every office.

In spite of the strong demand for electronic filing systems, those previously available did not penetrate the market very deeply. The reasons behind this were the high price tag and complex operation procedure, as well as the space factor (conventional systems are very large). Moreover, most of the currently available electronic filing systems use non-rewritable optical disks, a great inconvenience when processing active documents.

With these thoughts in mind, Canon developed the Canofile 250 - compact, easy to use, reasonably priced and with a magneto optical disk that's rewritable. The Canofile 250 is specially suited for those smaller offices and businesses that perhaps refrained from purchasing electronic filing systems, however desirable, due to high cost and/or complex operation. Additionally, departmental sections within large corporations will also find the Canofile 250 particularly helpful.

## HIGH CAPACITY

The Canofile 250 uses Canon's newly developed Magneto Optical

Disk (MOD) 'Diskfile 502M' which provides high-speed access to and high-capacity storage of data in a removable cartridge format - about the size of a standard CD.

Although magneto-optical technology is a relatively new concept, it utilizes principles of magnetic recording which were proven effective long ago. The result is a high-capacity recording and storing system that combines the best of optical and magnetic disk technology allowing information to be updated or deleted.

## BLINDING SPEED

Conventional filing cabinets are often bulky and cumbersome to sort through, but with the Canofile 250 electronic filing system, thousands of files can be easily and conveniently stored on one desktop.

What once might have taken office staff several hours to file, now can be done in a matter of minutes. A single magneto optical disk can store up to 13,000 A4 / letter-sized sheets of image information. Additionally, the Canofile reads at a blinding speed of 40 double-sided A4 / letter-sized pages per minute. And to accommodate irregular sized information such as resumes or business cards, scanning single sheets via manual-feeding is possible.

## SIMPLE AND EFFICIENT

Simple and efficient indexing is

*Continued on Page 8*



## Helping Hand Continued

a very good job of this. Most Contact Management and Marketing Management applications are designed to do very specific tasks - improve the efficiency of the sales cycle, improve customer relations, and take advantage of direct mail and telemarketing more effectively.

Relaying on an accounting sub-ledger to handle the hundreds of tasks associated with Contact/Marketing Management would be like swatting flies with a brief case - possible but not effective.

### SOFTWARE REQUIREMENTS

When planning out your software needs it is vital that you take into account the size of your database, the output you expect to achieve, your reporting requirements (sales managers that are sticklers for statistics should pay particular attention to this one), flexibility, expandability, and whether or not networking is important.

Research will only make your buying decision the right one. Remember that once you're full swing into setting up the database itself, switching programs can mean a lot of blood, sweat, and tears. Evaluate your needs closely and get everyone that will be involved later on, involved in the pre-buying cycle.

There are many contact management applications on the market today - some of those include The Maximiser, TeleMagic, UpTrends Marketing Manager, and Act! - through proper research and planning you will more than likely make the right decision.

### HARDWARE REQUIREMENTS

This is not an easy topic as it is

dependent upon the type of application you purchase and what its intended purpose is. For example someone buying a Unix based system will require completely different hardware over someone buying a LAN-tastic system.

What remains constant is the device used to produce output; i.e. the printers. If you

print out the odd letter and don't participate in any form of mass mailers then a 4 Page Per Minute laser such as the Canon LBP-4 will do you just fine. However, if you produce double-sided highly complicated mailers for a number of people, the Canon LBP-4 Mark IIR will be more up your alley.

If you plan on using laser labels then a dot matrix or bubble jet printer isn't necessary. For us we use a high speed dot matrix to produce over 2,000 labels per month for our newsletter - laser labels just don't cut it.

### IN CLOSING

Remember these simple rules and you won't mess up:

1. Select the software package that best suits your overall needs.
2. Keep your database up-to-date through constant usage.
3. Don't make your system so complex no one can use it.
4. Categorize your customers clearly and correctly.

We have covered a tremendous amount of information, of which we hope you gained from. It is clear that customer database management is a vital tool for most businesses, whether you be a dry cleaning service or an accounting firm doing income taxes.

**AND**

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## Canofile Continued

another advantage that makes the Canofile 250 such an indispensable asset to your office. The Canofile 250 offers four indexing methods: Index Call (visual graphics), File Name, File Number, and Date. Each method lets you store, classify and retrieve your information with ease.

## HIGH QUALITY OUTPUT

The Canofile 250 comes bundled with Canon's Fileprint 100 laser beam printer which produces 400dpi print-

outs at the speed of 4 pages per minute. The high resolution guarantees image information as clear as the originals, and the high-speed printing results in quick and efficient dis-

tribution of information.

## IN REVIEW

The Canofile 250 is the ideal compact and affordable solution to the urgent need of information management. For further information please contact the AND office nearest you. This exciting new product will also be featured at the Vancouver Business Computer Show and the U.B.C. Computer Show (See the front cover for further information on these events).



Figure 1. Survey of Japanese management shows priorities for a better office environment.

AND



## Reader Response Card



Contact: \_\_\_\_\_  
 Position: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_  
 Prov: \_\_\_\_\_ Postal Code: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Local: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Type of Business: \_\_\_\_\_

Please send me ANOVATION monthly:  
 Please have an AND Rep contact me.  
 Please send me more information on:

☐ Microsoft Office  
☐ Zenith MasterPort 366SL  
☐ Computer Training

☐ Canon Canofile 250  
☐ Canon IP-300/330  
☐ PC Tune-Up

Suggestions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**STAPLE  
 BUSINESS CARD  
 HERE**